

APPLICATIONS FOR ADMISSION AND FOR TRANSFER

The Constitution provides that the Board of Direction shall elect or reject all applicants for *Admission* or for *Transfer*, and, in order to determine justly the eligibility of each candidate, the Board must depend largely upon the Membership for information.

This list is issued to members in every grade for the purpose of securing all such available information, and every member is urged to scan carefully each monthly list of candidates and to furnish the Board with data in regard to any applicant which may aid in determining his eligibility. It is the *Duty* of all *Members* to the *Profession* to assist the Board in this manner.

It is especially urged, in communications concerning applicants, that errors in the record be pointed out and a *Definite Recommendation as to the Proper Grading in Each Case* be given, inasmuch as the grading must be based upon the opinions of those who know the applicant personally, as well as upon the nature and extent of his professional experience. If facts exist derogatory to the personal character or to the professional reputation of an applicant, they should be promptly communicated to the Board. *Communications Relating to Applicants are considered by the Board as Strictly Confidential.*

The Board of Direction will not consider the applications herein contained from residents of North America until the expiration of thirty (30) days, and from Non-Residents of North America until the expiration of ninety (90) days from October 1, 1924.

MINIMUM REQUIREMENTS FOR ADMISSION

Grade	General Requirement	Age	Length of Active Practice	Responsible charge of work
Member	Qualified to design as well as to direct work	30 years	10 years*	5 years
Associate Member	Qualified to direct work	25 years	6 years*	1 year
Junior	Qualified for sub-professional work	18 years†	2 years*	
Affiliate	Qualified by scientific acquirements or practical experience to co-operate with engineers			
Fellow	Contributor to the permanent funds of the Society			

* Graduation from a school of engineering of recognized reputation is equivalent to 2 years' active practice.

† Membership ceases at age of 32 unless transferred to higher grade.

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This list is issued to members in every grade for the purpose of securing all such available information and every member is urged to scan carefully each monthly list of candidates with care.

LIST OF APPLICANTS.

Names and Addresses of Applicants for Admission and for Transfer on this Preliminary List, Arranged Alphabetically.

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* Graduation from a school of engineering or engineering technology is equivalent to 2 years' active practice.
† Membership ceases at age of 32 unless transferred to higher grade.

The Board of Education will consider all applications for admission or transfer on this list not less than thirty days after the date of its issue.

The fact that applicants give the names of certain members as references does not necessarily mean that such members endorse.

The numbers at the left of each name indicate the serial number of the applicant for the current year, and the district in which he resides.

The abbreviations in *Italics* represent, respectively, *TT*, Total Time; *SP*, Sub-Professional Work; *P*, Professional Work; *RC*, Responsible Charge; *D*, Design. The figures showing the amount of time spent in Responsible Charge and on Design are the estimate of the Applicant. The allowance of two years for graduation and of one-third of a year for each academic year successfully completed in an engineering college without graduation are included in Total Time and Sub-Professional Work.

FOR ADMISSION

821 (10) AULL, LUTHER BACHMAN, Jr., Box 536, Greenwood, S. C. (Age 23. Born Newberry, S. C.) 1922 B. S., The Citadel, Charleston, S. C. 1924 M. S., Univ. of N. C. July to Aug. 1924 Instrumentman on hydro-electric developments for Mees & Mees, Charlotte, N. C. At present Draftsman, South Carolina Highway Comm. *TT* 2.1: *SP* 2.1. Refers to T. C. Atwood, G. M. Braune, H. W. Durham, T. F. Hickerson, T. Saville.

822 (14) BARRON, JAMES LLOYD, 1127 Ohio St., Lawrence, Kans. (Age 27. Born Hubbard, Ore.) 1920 B. A., and 1923 B. S. in C. E., Kansas Univ. June to Sept. 1921 Chf. of Party and Instrumentman, Drainage Dist. No. 1, Franklin Co., Kans., on topographical and property survey, etc. *TT* 2.3: *SP* 2.3. June to Sept. 1922 Chf. of Party and Instrumentman on power survey, including location and survey of reservoir sites and pipe-lines on Pikes Peak for City of Colorado Springs, Colo. *TT* 0.3: *SP* 0.3. July 1923 to date Asst. Engr., Div. of Water and Sewage, Kansas State Board of Health, inspection of water supplies and sewage disposal works. *TT* 1.1: *P* 1.1. *TT* 3.7: *SP* 2.6: *P* 1.1. Refers to E. Boyce, A. H. Jewell, H. P. McKean, W. C. McNowen, H. A. Rice, F. A. Russell.

823 (2) BARRY, WALTER VINCENT, 174 Spring St., New Haven, Conn. (Age 40. Born Boston, Mass.) July 1906 to April 1909 Draftsman, American Bridge Co., East Berlin and Pencoed Plants, Detailer, mill and office buildings and small highway bridges. *TT* 2.7. April 1909 to Aug. 1910 Draftsman, Berlin Constr. Co., same work, also Checker. *TT* 1.3. Aug. 1910 to Jan. 1911 Draftsman, Post & McCord Co., Detailer, office buildings (Bankers' Trust Co.). *TT* 0.4. Jan. 1911 to June 1919 Structural Draftsman, New York, New Haven and Hartford R. R. Co., detailing, designing and checking railroad and highway bridges; inspecting bridges and recommending repairs, etc.; also inspecting and cataloguing strength of bridges, etc. *TT* 8.4: *RC* 5: *D* 8. June 1919 to date City Bridge Engr., City of New Haven, Conn., designing and constructing city highway bridges, buildings, dams, etc. *TT* 5.2: *RC* 5.2: *D* 5.2. *TT* 13.2: *RC* 10.2: *D* 13.2. Refers to C. T. Bishop, C. Blakeslee, F. L. Ford, F. J. Pitcher, P. B. Spencer, E. W. Wiggin.

824 (1) BASCOMBE, BARTOW STRANG, Care, Commonwealth Water Co., Summit, N. J. (Age 38. Born Plainfield, N. J.) 1913 B. S. in C. E., Univ. of Ill. May 1914 to Jan. 1917 Leveler, New York State Highway Comm.; Inspector, Chf. of Party and Res. Engr. on construction of brick pavement, concrete and macadam highways, design and estimating. *TT* 4.5: *SP* 3.2: *P* 1.3: *RC* 2: *D* 0.5. Jan. 1917 to Jan. 1918 Engr. and Constr. Supt. on power house reconstruction, Ohio Service Co., Coshocton, Ohio, installation 2000 K. W. G. E. turbine, condenser and auxiliaries for Warren Light and Power Co., Warren, Pa. *TT* 0.9: *P* 0.9: *RC* 0.9: *D* 0.2. Jan. 1918 to Aug. 1919 Private, U. S. Artillery, 2d Lieut. and 1st Lieut., Engrs., U. S. Army, railroad and highway construction, A. E. F. *TT* 1.7: *SP* 0.3: *P* 1.4: *RC* 1: *D* 0.1. Aug. 1919 to July 1920 Res. Engr. on \$750 000 project Latrobe (Pa.) Water Co., construction of 75 000-cu. yd. earthen dam, 3 miles 24-in cast iron pipe-line,

4 miles 24-in. wood stave pipe, four river crossings; installation of 150-h. p. boiler and Cameron pump (4500 g. p. m.). *TT 1: P 1: RC 1: D 0.3.* July 1920 to April 1921 Supt., Black Creek Coal Co., Nanticoke, Pa., construction and operation recovering 250 000 tons of coal from lake bottom; design of coal-handling equipment and washery. *TT 0.8: P 0.8: RC 0.8: D 0.2.* April 1921 to May 1922 Constr. Engr. and Constr. Supt., Warren (Pa.) Light and Power Co., on installation of 3 000-k. w. Westinghouse turbo-generator and jet condenser and auxiliaries, deep excavation and foundation underpinning; construction of timber crib dam, Susquehanna, Pa. *TT 1: P 1: RC 1: D 0.3.* June to July 1922 drafting and design for Woodlawn, Pa., Land & Water Co. (subsidiary of Jones & Laughlin Steel Corp.), land sub-division, water and sewage system. *TT 0.2: P 0.2: RC 0.2: D 0.1.* July to Sept. 1922 Section Engr., The Philadelphia Co., Pittsburgh, Pa., on investigations, surveys, design of power houses and sub-stations, high tension steel towers, river docks and coal-handling equipment. *TT 0.3: P 0.3: RC 0.1: D 0.2.* Sept. 1922 to date Constr. Engr. and Constr. Supt., on 2 000 cu. yd. levee construction along White River for Muncie (Ind.) Water Works Co. (Sept. to Nov. 1922), 5 miles of 24-in., 2 miles of 12-in. and one mile of 8-in. cast iron pipe, Huntington (W. Va.) Water Corporation (final estimate \$125 000) (Nov. 1922 to May 1923), and (since May 1923) reconstruction of two pump stations, installation of two pump units, air compressors, boilers, auxiliaries, driving wells for Commonwealth Water Co., Summit, N. J., American Const. & Sec. Co., Eng. Dept. of American Waterworks & Elec. Co., New York City. *TT 2: P 2: RC 2: D 0.3.* *TT 12.4: SP 3.5: P 8.9: RC 9: D 2.2.* Refers to R. S. Charles, W. T. Huber, G. T. Keith, E. G. Middleton, A. L. Trimpi, W. R. Weldman.

825 (10) BEERS, GILBERT FRANCIS, Southern Ferro Concrete Co., Atlanta, Ga. (Age 28. Born Taunton, Mass.) 1919 B. S. Mass. Inst. Tech. June to Nov. 1919 organized The Gilbert Beers Co., Inc., in Fulton County, Ga.; built three residences (contracts totaled \$19 000). *TT 2.4: RC 0.4.* Nov. 1919 to date with Southern Ferro Concrete Co., Gen. Confrs., Atlanta, until May 1923 in Estimating Dept., then Supt. on construction in field of Boys' Senior High School, Atlanta, and since July 1924 Estimator. *TT 4.8: RC 4.8.* *TT 7.2: RC 5.2.* Refers to H. W. Beers, A. V. Gude, B. M. Hall, C. E. Kauffmann, R. G. Lose, E. F. Miller, W. C. Spiker, C. M. Spofford.

826 (15) BISSET, JOHN CLIFFORD, 521 E. 13th St., Dallas, Tex. (Age 24. Born Leocompton, Kans.) 1924 B. S. C. E., Kans. Univ. June to Sept. of years 1922 and 1923 Asst. to County Engr., York, Nebr. June 1924 to date Instrumentman with Myers & Noyes, Dallas, Tex. *TT 2.2: SP 2.2.* Refers to W. C. McNowen, E. L. Myers, E. N. Noyes, H. A. Rice, F. A. Russell.

827 (9) BLOXTON, CONWAY RUSSELL, P. O. Box 355, Frankfort, Ky. (Age 27. Born Calverton, Va.) 1918 B. S. in C. E., Va. Pol. Inst. (State A. & M.) Aug. to Dec. 1918 2d Lieut., 605th Engr. Regt., U. S. C. E.; also with other regiments while stationed at Washington Barracks; prior to this Private, 1st Class, Engr. regiment. *TT 2.4: SP 2: P 0.4: RC 0.4.* Jan. to March 1919 Inspector on plant construction, Newport News (Va.) Shipbuilding and Dry Dock Co. *TT 0.2: SP 0.2.* April to June 1919 Jun. Engr., Illinois State Highway Dept., Springfield, checking plans, bid tabulation and usual work in highway road office. *TT 0.2: SP 0.2.* July 1919 to Nov. 1920 Designer on highway bridges, and April 1921 to date Designer, Chf. Draftsman and Asst. Bridge Engr., on highway bridge design and supervision of design, Bridge Dept., Dept. of State Roads and Highways, Frankfort, Ky. *TT 4.6: P 4.6: RC 1.6: D 3.* Nov. 1920 to April 1921 Designer, Atlas Portland Cement Co., Northampton, Pa., on design of machinery, buildings and general plant layout. *TT 0.5: P 0.5: D 0.5.* *TT 7.9: SP 2.5: P 5.5: RC 2: D 3.5.* Refers to W. J. Camlin, W. J. Carrel, J. T. Madison, J. L. Nagle, C. D. Snead, E. N. Todd.

828 (3) BREITHAUP, PHILIP WILLIAM, 66 Margaret Ave., Kitchener, Ont., Canada. (Age 25. Born New York City.) 1922 C. E., Rens. Pol. Inst. 1922-1923 (1 year) student, Dept. of Economics, Harvard Univ. June 1923 to date Asst. to Job Accountant, Time and Material Clerk, Asst. to Line and Grade man, and Line and Grade man, Turner Constr. Co., New York City. *TT 3.2: SP 3.2.* Refers to K. Allen, W. H. Breithaupt, E. R. Cary, P. W. Henry, W. W. Rousseau.

829 (7) BREVIK, BERRY EDMUND, 2905 Woodman Ave., Ames, Iowa. (Age 33. Born Sioux City, Iowa.) 1918 B. S. in C. E., and 1919 C. E., Iowa State Coll. 1922 M. S. in Eng., Univ. of Mich. Over 3½ years Rodman, Chainman, Instrumentman, Chf. of field party and Draftsman, with Smith & Finley, Sioux City, Iowa, on highway and railway location, drainage, pavement and municipal work, and surveys. *TT 5.6: SP 4.1: P 1.5: RC 0.4:*

D 0.8. Summers 1914-1916 Inspector, Instrumentman and Field and Office Engr., Plymouth County, Iowa, on road and bridge design and construction, municipal pavement. Summer 1917 Draftsman and Inspector, Woodbury County, Iowa, on bridge and road design and bridge construction. April to July 1918 Draftsman, Iowa Highway Comm., on road and bridge design. *TT 0.3: SP 0.2: P 0.1: D 0.1.* Jan. to Aug. 1919 Road Designer, and Sept. 1919 to June 1920 Office Engr. in charge of district office, Iowa Highway Comm. *TT 1.4: SP 0.2: P 1.2: RC 0.7: D 1.4.* Aug. 1920 to April 1921 Res. Engr. and Designer, Spokane County, Wash., on concrete construction paving and subway, reinforced concrete and steel bridge design. *TT 0.8: P 0.8: RC 0.5: D 0.5.* April to Oct. 1921 Engr., Glasser Constr. Co., Spokane, Wash., in charge of design and construction of grain elevators, mill buildings and general building construction. *TT 0.6: P 0.6: RC 0.6: D 0.3.* June 1922 to Jan. 1923 Res. Engr., Michigan State Highway Dept., on Federal Aid highway construction, grading and concrete. *TT 0.6: P 0.6: RC 0.4: D 0.1.* April 1923 Supt., Bonners Ferry, Idaho, on construction of reinforced concrete reservoir. *TT 0.1: P 0.1: RC 0.1.* May to Sept. 1923 Field Engr., Spokane County, on reinforced concrete bridge construction. *TT 0.5: P 0.5: RC 0.2.* Sept. 1923 to June 1924 Instructor in Civ. Eng., Univ. of Minnesota. *TT 0.8: P 0.8: RC 0.2.* June to Sept. 1924 Instructor in, and at present Asst. Prof. of, Highways, Iowa State Coll. *TT 0.3: P 0.3: RC 0.2.* *TT 11.4: SP 4.5: P 6.9: RC 3.3: D 3.2.* Refers to T. R. Agg, H. S. Baker, F. Bass, E. W. Dunn, C. M. Finley, W. L. Morgan, C. S. Nichols.

830 (15) BRIGGS, JAMES HARVEY, Care, Texas Trap Rock Co., San Antonio, Tex. (Age 39. Born Brooklyn, N. Y.) 3 years student in Eng. Course, A. & M. Coll. of Texas, and Univ. of Tex. 1905-1906 Rodman on railroad construction from Monterey to Matamoros, Mexico (6 months); on location of houses for transmission line and Supt. of Constr., Mexico City to El Oro, Mexico (4 months); Draftsman, American Smelting & Refining Co., Velardena, Mexico (8 months); Draftsman, Cia Minora de Penoles, Makimi, Mexico (3 months); and Draftsman, Montezuma Copper Co., Nacazari, Mexico (3 months). *TT 2: SP 2.* 1907 Levelman and Supt. of Constr., Southern Pacific R. R. in Mexico. *TT 1: SP 1.* 1912-1913 Supt. with Atlee B. Ayres, Archt., San Antonio, Tex. *TT 2: SP 2.* 1915 Sales Engr., Uvalde Rock Asphalt Co., San Antonio. *TT 1: SP 1.* 1917-1918 1st Lieut., Engrs., U. S. Army. *TT 1.5: SP 1.5.* 1919 Sales Engr., Texas Bitulithic Co., San Antonio. *TT 1: SP 1.* 1921-1924 Sales Engr., Texas Trap Rock Co., San Antonio. *TT 3: SP 3.* *TT 11.5: SP 11.5.* Refers to E. P. Arneson, T. Bartlett, R. J. Harding, J. B. Hawley, F. E. Rightor.

831 (15) BURDEN, WILLIAM WILSON, 1742 East 6th St., Tulsa, Okla. (Age 33. Born St. Louis, Mo.) 1912 B. S. in C. E., Univ. of Mo. June 1912 to Aug. 1914 with Sewer Dept., City of St. Louis, until March 1913 as Rodman, Design Div., office work, design and drafting; then Inspector, Constr. Div., Asst. to Res. Engr. on sewer construction. *TT 4.1: D 0.5.* Aug. 1914 to May 1917 Engr., Constr. Div., Dept. of the President, Board of Public Service, St. Louis, laying out and Res. Engr. on construction work, and designing public utilities. *TT 2.8: RC 0.9: D 0.5.* May 1917 to May 1919 with Corps of Engrs., U. S. Army, 12th Engrs., until March 1918 as Student Officer and Capt., mostly foreign service, as Battalion and Regimental Adjutant; then Major, active service in France, field fortifications and construction and maintenance military railways. *TT 2: RC 1.2.* June 1919 to Oct. 1922 in Constr. Div., Dept. of the President, Board of Public Service, St. Louis, until July 1920 as Dist Engr., being Res. Engr. in charge of construction of sewers and paving; then Gen. Supt. Constr., in charge of construction of 12-ft. concrete sewer (South Harlem). *TT 3.4: RC 3.4.* Nov. 1922 to date with Standard Paving Co., Tulsa, Okla., until June 1924 as Supt. Tunnel Constr., in charge of construction of Tiawah Tunnel, Spavinaw Project for City of Tulsa; since then Chf. Engr., in charge of all engineering work of firm, including bids, estimates and operation on contracts and plant design. *TT 1.8: RC 1.8.* *TT 14.1: RC 7.3: D 1.* Refers to B. L. Brown, W. R. Holway, W. W. Horner, F. G. Jonah, E. R. Kinsey, W. E. Rolfe, J. W. Skelly.

832 (1) EARLE, FRANK HASBROUCK, 59 South Parkway, East Orange, N. J. (Age 40. Born Jersey City, N. J.) 1904 to 1907 with Earle and Harrison, Civ. Engrs., Jersey City, N. J., as Chainman, Rodman and Asst. Engr. in charge of work; also Transitman, Asst. Engr., on surveys and levels, and inspected and supervised pile-driving, building of bulk-head, filling and concrete foundation for industrial plant at Edgewater, N. J., etc., and improvements for American Cotton Oil Co., Guttenberg, N. J., crib and pile bulk-heads and filling. *TT 3: SP 1: P 2: RC 2.* 1907 to 1911 member of firm, Harrison, Dunham & Earle, inspected construction of two piers for American Cotton Oil Co., ground construction of dam and diversion sewer for Middlesex Water Co., Rahway, N. J.; 1908-1909 also on general engineering work including chain of borings and sounding parties for manufacturing plant

foundations and Pennsylvania Railroad Bridge, Yardville, N. J.; 1909-1911 on surveys, levels and inspecting borings for preparation of plans for Passaic Sewerage Comm. and other engineering work. *TT 4: P 4: RC 4.* 1911 to 1922 not in engineering practice. 1922 to date assisting and advising, R. B. Cahill, Contr., 4 000 lineal ft. of retaining wall, filling, foundation at Pelham Bay, Pelham Manor, N. Y.; also consulting and advising for bids for reinforced pavement, excavation and curb in East Orange, N. J.; at present Vice-Pres., R. B. Cahill & Co., Inc., Newark, N. J., preparing bids for road construction, etc. *TT 2: P 2. TT 9: SP 1: P 8: RC 6.* Refers to E. W. Harrison, F. H. Reimer, M. R. Sherrerd, J. E. Snell, W. G. Taylor, C. A. Van Keuren, T. J. Wasser, N. D. Wortendyke.

833 (1) GLEASON, DANIEL WALTERS, 1303 Dean St., Brooklyn, N. Y. (Age 34. Born Brooklyn, N. Y.) Jan. 1905 to Jan. 1908 Draftsman for H. Olmsted, Archt., Brooklyn, N. Y., on residence and apartment house work. *TT 3: SP 3.* May 1910 to Jan. 1920 Draftsman, Checker, Designer, Supervisor or Squad Leader, Architectural Dept., Westinghouse, Church, Kerr & Co., Engrs., New York City, on power houses, railroad shops, stations and yards, industrial buildings, hotels and residences. *TT 9.7: SP 3.7: P 6: RC 4: D 2.* Jan. 1920 to Nov. 1922 Chf. Draftsman, Miller, Franklin, Basset & Co., Engrs., New York City, on industrial buildings and residences, also on appraisals of industrial buildings and equipment. *TT 2.8: P 2.8: RC 1.8: D 1.* Nov. 1922 to Aug. 1923 Chf. Draftsman and Asst. Chf. Engr., Gorman, Brown Eng. Corp., New York City, on industrial buildings. *TT 0.7: P 0.7: RC 0.5: D 0.2.* Aug. 1923 to date Designing Engr., Henry L. Doherty & Co., New York City, in Concrete Div. on power-house work. *TT 1: P 1: D 1. TT 17.2: SP 6.7: P 10.6: RC 6.3: D 4.2.* Refers to L. O. Barker, Jr., P. Clow, L. R. Cobb, A. B. Fleck, M. A. Fouhy, R. A. Marshall, C. E. Payne.

834 (1) GOURLEY, HAROLD JOHN FREDERICK, 30 Buckingham Gate, London, S. W. 1, England. (Age 37. Born Liverpool, England.) 1909 B. Eng., and 1912 M. Eng., Univ. of Liverpool. June 1909 to Nov. 1910 hydraulic research, Liverpool Univ. *TT 3.4: SP 2: P 1.4.* Nov. 1910 to Nov. 1912 Pupil with Sir Alexander Binnie, on surveys and designs in connection with water supply and drainage. *TT 2: P 2: D 1.* Nov. 1912 to May 1915 with Sir Alex. Binnie Son & Deacon, until Sept. 1914 as Asst. Engr., detailed examination of various schemes submitted for drainage and sewage disposal of Petrograd and preparation of independent scheme in outline (estimated cost £9 000 000), surveys, plans and estimate for reservoir and distribution system, Genoa, Italy (£50 000), and for service reservoir, Biggleswade, England (£21 000); then Chf. Asst. Engr., completion of contract drawings and quantities for aqueducts (30 and 15 miles long) for Birkenhead, England, and Merthyr-Tydfil, S. Wales, including balancing tanks, tunnels and auxiliary works (£850 000). *TT 2.5: P 2.5: RC 0.7: D 0.6.* May to Dec. 1915 and March 1919 to March 1920 Res. Engr., Birkenhead Aqueduct (12 miles long, 28-in. cast iron main, tunnel, river and railway crossings and break-pressure tank, £240 000). *TT 1.6: P 1.6: RC 1.6.* Dec. 1915 to March 1919 in Royal Engrs. as 2d Lieut. and finally Major in Command 438th Field Co. *TT 3.3: SP 3.3.* March 1920 to date with Sir Alex. Binnie Son & Deacon, until Dec. 1923 as Chf. Asst., on reports and preparation of evidence, also responsible for plans, specifications and quantities for drainage and sewage disposal of Milford Haven, S. Wales (£52 000), intakes, pipe-line and tunnel, water supply of Ebbw Vale, S. Wales (£80 000), sewerage and sewage-disposal works, Sandy, England (£30 000); and in charge of construction, Northern Relief Sewer, Acton, London (£210 000); since then member of firm, Cons. Civ. Engrs., at present works of water supply, water power, etc., of firm amount to over £2 500 000. *TT 3.5: P 3.5: RC 3.5. TT 17.3: SP 5.3: P 12: RC 6.8: D 1.6.* Refers to G. W. Fuller, T. C. Hatton, G. B. Kershaw, J. F. Sanborn. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

835 (4) GRELLIS, JOHN JOSEPH, Jr., 826 E. Price St., Philadelphia, Pa. (Age 33. Born Philadelphia, Pa.) Registered Prof. Engr., State of Pennsylvania. 1911 B. S. in C. E., Univ. of Pa. 1911 to 1914 Draftsman and Detailer, Philadelphia Steel and Wire Co., detailing reinforced concrete structures. *TT 5: SP 5.* 1914 to date Designer and Dist. Engr., Concrete Steel Co., Philadelphia, first 3 years on design, and since then has had responsible charge and supervision of design and detail of reinforced concrete structures, including buildings, bridges, sewers and roads. *TT 10: SP 3: P 7: RC 7: D 7. TT 15: SP 8: P 7: RC 7: D 7.* Refers to H. T. Campion, W. H. Gravell, W. F. Newbery, W. R. Sauter, J. J. Vogdes.

836 (15) GRIDLEY, FRANKLIN BOYDEN, Apartado No. 17, Panuco, Vera Cruz, Mex. (Age 45. Born Minneapolis, Minn.) 1903 C. E., Rens. Pol. Inst. June to Sept. 1901 Bridge Inspector on steel bridges and culverts, and Jan. to March 1902 Instrumentman, New York

Central & Hudson River R. R. TT 2.2: RC 0.2. April to Oct. 1902 Instrumentman, City of Troy, N. Y. TT 0.5: RC 0.5. Sept. 1903 to April 1904 Head Chainman and Instrumentman, Pacific Elec. Ry. TT 0.6: RC 0.6. April to July 1904 Instrumentman for City of Troy. TT 0.3: RC 0.3. July to Sept. 1904 Asst. Engr., Elmira & Corning Short Line Ry., Elmira, N. Y., on field work for location. TT 0.2: RC 0.2. Sept. to Oct. 1904 Engr. in Chg., P. H. Harrison Sons & Co., Newark, N. J., excavating drainage canal near Hackensack, N. J. TT 0.2: SP 0.2. Nov. 1904 to March 1905 Instrumentman, N. Y. C. & H. R. R. R. TT 0.4: RC 0.4. April 1905 to Dec. 1906 Asst. City Engr., Troy, in charge of field work, design and construction of bridges, sewers and pavements. TT 1.6: RC 0.8: D 0.3. Jan. to Dec. 1907 Asst. Engr., United Traction Co., Albany, N. Y., in charge of double-tracking and M-of-W. work on Northern Div. TT 1: RC 0.8: D 0.2. Jan. 1908 to June 1909 Deputy City Engr., Troy, in charge of all field work, designing and construction of bridges, pavements and sewers. TT 1.5: RC 0.7: D 0.7. June 1909 to March 1910 Res. Engr., W. J. Beardsley, Archt., Poughkeepsie, N. Y., in charge of field engineering and construction work on Bear Mountain Prison. TT 0.7: RC 0.4: D 0.3. June 1910 to June 1912 Res. Engr., Los Angeles County Highway Comm. of California, in charge of construction of pavements, bridges and culverts by contract and administration. TT 2: RC 2. July 1912 to Nov. 1914 Eng. Contr., bridges, culverts, sewers, pavements and roads. TT 2.3: RC 2: D 0.3. Dec. 1914 to Aug. 1916 Engr. of Cahunja Valley Road Dist., Los Angeles County, Cal., in charge of all construction and maintenance of bridges, pavements and roads. TT 1.6: RC 1: D 0.6. Sept. 1916 to March 1917 Eng. Contr., general contracting of bridges, culverts, sewers, payments and roads. TT 0.7: RC 0.7. April to Nov. 1917 Asst. Terminal Supt., Huasteca Petroleum Co., Tampico, Mexico, general terminal work. TT 0.7: RC 0.7. Jan. to Aug. 1918 Constr. Engr., Island Oil & Transport Corporation, Tampico, Engr. in charge of construction of Palo Blanco Sea Loading Terminal. TT 0.7: RC 0.4: D 0.3. Nov. 1918 to Jan. 1919 Capt., Engrs., U. S. Army. TT 0.2. Jan. to June 1919 Engr., Island Oil & Transport Co., Designing and construction work. TT 0.5: RC 0.2: D 0.3. July 1919 to March 1920 Terminal Supt., Agwi Oil Corporation, Tampico, in charge of construction of Tecomate Sea Loading Terminal. TT 0.8: RC 0.5: D 0.3. June 1920 to May 1921 Terminal Supt., National Oil Co., Tampico, in charge of construction and operation of Hermosillo River Terminal. TT 0.9: RC 0.6: D 0.3. July 1921 to June 1922 Supt. of Transportation, Cia Mexicana de Terrenos y Petroleo S. A., in charge of land and water transportation, building all bridges, roads, etc. TT 1: RC 1. Sept. 1922 to March 1923 Engr., James F. Martin & Co., Tampico, in charge of railroad for company. TT 0.5: RC 0.5. May to Dec. 1923 Engr., Transcontinental Petroleum Co., Tampico, in charge of designing, construction and operation of 100 000-bbl. "El Barco" Pump Station with tanks, pipe-lines, etc. TT 0.7: RC 0.4: D 0.3. Jan. 1924 to date Supt., Kone & Willis S. en C., Panuco, Vera Cruz, Mex., in charge of designing, constructing and operating all pump stations, terminals, pipe-lines, tanks, heaters, etc. TT 0.6: RC 0.3: D 0.3. TT 2.5: RC 1.5: D 4.8. Refers to P. H. Albright, H. Carrington, E. R. Cary, J. Flynn, Jr., K. G. Howard, F. H. Joyner, S. L. Kone, P. C. Ricketts.

837 (11) GRUT, RYAN ASGER, 2000 Miramar, Los Angeles, Cal. (Age 29. Born Copenhagen, Denmark.) 1918 B. S. in C. E., Royal Tech. Coll., Copenhagen, Denmark. Sept. 1919 to April 1920 Designing Engr. for Christiani & Nielsen, Engrs. and Contrs., Copenhagen. TT 2.5: D 0.5. April to July 1920 Designing Engr., Trussed Concrete Steel Co. of London, England. TT 0.2: D 0.2. July 1920 to Oct. 1922 in responsible charge of contracts and their designs, Peter Lind & Co., Engrs. and Contrs., London. TT 2.2: RC 2.2. Oct. 1922 to April 1923 Designing Engr. and in charge of concrete plans, for McClellan & Junkersfeld, Engrs. and Constrs., New York City. TT 0.5: RC 0.5. May 1923 to date Designing Engr., Truscon Steel Co., Los Angeles (Cal.) Branch, since March 1924 Chf. Engr. and in full charge of engineering force. TT 1: RC 0.2: D 0.8. TT 6.4: RC 2.8: D 1.5. Refers to R. W. Atwater, B. N. Folling, H. T. Forchhammer, A. J. Smith, F. D. Wilcox.

838 (13) HAMPSON, JOSEPH HALE, Livermore, Cal. (Age 44. Born Washington, D. C.) 1906 A. B., Coll. of Chemistry, Stanford Univ. Feb. to Nov. 1915 Instrumentman, Shell Oil Co., Martinez, Cal. TT 2.8: SP 2.8. March 1916 to Oct. 1918 Asst. Constr. Engr., Broken Hill Proprietary, Ltd., Smelters, Port Piere, South Australia. TT 2.6: P 2.6. Dec. 1918 to Jan. 1920 Asst. Constr. Engr., Happy Valley Irrigation Dist., Anderson, Cal. TT 1.2: P 1.2. Jan. 1920 to Oct. 1921 Asst. Constr. Supt. for Stone & Webster, on Caribou hydro-electric work for G. W. P. Co., in charge of railroad transportation. TT 1.8: P 1.8. Nov. 1921 to July 1923 Test Engr. for City and County of San Francisco on O'Shaugnessy Dam, in charge of concrete material. TT 1.7: P 1.7. July 1923 to date Constr. Engr., Hetch Hetchy Trans-

mission Line, San Joaquin River to San Francisco. *TT 1.1: P 1.1: RC 1.1. TT 11.2: SP 2.8: P 3.4: RC 1.1.* Refers to C. S. Donald, N. A. Eckart, C. J. Emerson, T. H. Means, M. M. O'Shaughnessy, A. E. Paddock, O. W. Peterson, W. D. Shannon.

839 (7) HAUG, EUGENE HENRY, Wisconsin Bridge & Iron Co., North Milwaukee, Wis. (Age 30. Born Milwaukee, Wis.) 1915 to 1917 (2 years) Draftsman on mechanical, electrical and structural work, 1917 to 1922 (5 years) Mech. and Elec. Designer, also Chemical Analyst, and 1922 to date (2 years) Elec. Engr., Wisconsin Bridge & Iron Co. *TT 9: SP 5: P 4: RC 2: D 2.* Refers to A. C. Bell, S. C. Coddington, J. F. Jackson, J. C. Pinney, H. H. Svanöe.

840 (6) HAWKINS, FLOYD LEROY, Box 704, Martinsburg, W. Va. (Age 44. Born Blanchester, Ohio.) 1910 C. E., Ohio State Univ. June to Dec. 1910 Rodman, Baltimore & Ohio R. R. Co. *TT 2.5: SP 2.5.* Jan. 1911 to Feb. 1913 Asst. Engr., New York Coal Co., Nelsonville, Ohio, laying out, pointing, mapping, etc., for about eight coal mines. *TT 2.1: SP 2.1.* Feb. to May 1913 Draftsman, Pond Creek Coal Co., Stone, Ky. *TT 0.3: SP 0.3.* June to Oct. 1913 Engr. in charge of party for County Engr. at Walton, Fla., subdividing government lands into 40-acre farms. *TT 0.3: P 0.3: RC 0.3.* May 1917 to May 1919 Asst. Engr., running transit, in charge of party on road location, designing and mapping roads, and as Res. Engr. in charge of construction on roads, Mingo County, W. Va. *TT 1.5: SP 0.5: P 1: RC 0.5: D 0.5.* June to Oct. 1919 Asst. Engr., Wetzel County Road Dept., New Martinsville, W. Va.; Chf. of Party on location and design of roads, and Supt. of Constr. of concrete road. *TT 0.4: P 0.4: RC 0.2: D 0.2.* Nov. 1919 to March 1922 County Road Engr., Morgan County Court, Berkeley Springs, W. Va., in charge of all maintenance and construction of several miles of new roads. *TT 2.4: P 2.4: RC 2.4.* April 1922 to date Asst. Engr., State Road Comm. of West Virginia, at Martinsburg, in charge of maintenance and construction of State roads in Morgan, Berkeley and Jefferson Counties. *TT 2.5: P 2.5: RC 2.5. TT 12: SP 5.4: P 6.6: RC 5.9: D 0.7.* Refers to F. P. Arnold, J. P. Blundon, W. S. Downs, C. P. Fortney, B. E. Gray, A. O. Rose.

841 (8) HOOK, GORDON FRANKLIN, 4871 Winthrop Ave., Chicago, Ill. (Age 23. Born Haverhill, Mass.) 1924 S. B. in C. E., Mass. Inst. Tech., also completed work in San. Eng. except Thesis. June 1924 to date with San. Dist. of Chicago as Asst. Engr., work on construction of large activated sludge plant. *TT 2.2: SP 2.2.* Refers to J. B. Babcock, 3d, L. B. Barker, H. L. Bowman, C. B. Breed, L. B. Fugitt, C. M. Spofford, R. G. Tyler.

842 (5) HUMMEL, RUSSELL SUTCLIFFE, 105 Lancaster Rd., Richmond, Va. (Age 32. Born Hummelstown, Pa.) 1915 B. S. in Civ. Eng. and in Highway Eng., Pa. State Coll. June 1915 to June 1916 Foreman, John H. Wickersham, Inc., in charge of concrete gangs on concrete and steel building construction. *TT 3: SP 3.* June 1916 to March 1917 Valuation Engr. and Draftsman, Union R. R. Co., East Pittsburgh, Pa., valuation of buildings and bridges. *TT 0.8: SP 0.8.* March to July 1917 Chf. Engr. for C. W. Munson, Inc., in charge of design and construction of buildings and highways. *TT 0.3: P 0.3: D 0.3.* July 1917 to May 1919 1st Lieut., Engr. Corps, U. S. Army, in charge of bridge construction with 28th Div. in France. *TT 1.8: P 1.8: RC 1.8.* May 1919 to March 1921 with DuPont Eng. Co., until Jan. 1920 as Asst. Engr. of Constr., in charge of street and sewer construction; then Cost Engr. in charge of cost systems, physical progress, setting tasks for piece work and profit sharing schemes, also in charge of estimating. *TT 1.9: P 1.9: RC 1.9.* March 1921 to March 1922 Design Engr. for City of Richmond, Va., in charge of sewer designs and estimates (construction \$750 000 annually). *TT 1: P 1: D 1.* March 1922 to June 1924 Chf. of Bureau of Street Paving, Richmond, in charge of street design and construction (work \$1 500 000 annually). *TT 2.2: P 2.2: RC 1.1: D 1.1.* June 1924 to date Vice-Pres. in charge of construction for Allen J. Saville, Inc. *TT 0.2: P 0.2: RC 0.2. TT 11.2: SP 3.8: P 7.4: RC 5: D 2.4.* Refers to J. Bolton, G. M. Bowers, T. B. Merrick, J. M. Penick, A. J. Saville, T. T. Towles, E. D. Walker.

843 (1) JIRANEK, LEO AUGUST, Princeton Club, New York City. (Age 24. Born Grand Rapids, Mich.) 1922 C. E., Princeton Univ. July 1922 to April 1923, Job Accountant, on lines and grades, Steel Supt. and Asst. Supt., Turner Constr. Co., New York City. *TT 2.7: SP 2.7.* March 1924 to date Asst. Supt., same Company. *TT 0.5: P 0.5: RC 0.5. TT 3.2: SP 2.7: P 0.5: RC 0.5.* Refers to G. E. Beggs, R. W. Boyd, F. H. Constant, D. H. Dixon, E. J. Moore, J. P. H. Ferry, T. A. Smith, A. W. Stephens.

844 (7) JOHNS, JAMES EDMOND, 321 South Cedar St., Lansing, Mich. (Age 24. Born Chicago, Ill.) 1924 B. S., Univ. of Mich. *TT 2: SP 2.* Refers to J. H. Cissel, A. J. Decker, L. M. Gram, W. C. Hoad, H. E. Riggs.

845 (11) KASEL, RUDOLPH GUSTAV, U. S. Geological Survey, Grand Canyon, Ariz., Care, Fred Harvey Transportation Co. (Age 24. Born St. Louis, Mo.) 1923 B. S. in Civ. Eng., Mo. School of Mines and Metallurgy. May to Aug. 1922 Draftsman in Machine Switching Dept., Western Elec. Co., Chicago, Ill., on automatic telephone switchboard layouts and change orders. TT 2: SP 2. June to Oct. 1923 Draftsman and Instrumentman, Southern Carbon Co., Fairbanks, La., plant layout, maps, charts, welded pipe details, etc., also land surveys, levels on billings, pipe-line surveys, townsite maps, etc. TT 0.3: SP 0.3. Oct. 1923 to April 1924 Draftsman and Computer, Missouri State Highway Dept., general highway drafting, design and computations and estimates. TT 0.5: SP 0.3: P 0.2. April 1924 to date Jun. Engr., on stream measurement work, Water Resources Branch, Dept. of Interior, U. S. Geological Survey. TT 0.4: P 0.4. TT 3.2: SP 2.6: P 0.6. Refers to D. A. Dudley, W. S. Guedry, E. G. Harris, T. G. MacCarthy, C. V. Mann, F. W. Sayers.

846 (15) KIRKPATRICK, CARLOS STEVENS, 407 Union Station, Houston, Tex. (Age 43. Born Carrollton, Ark.) July 1900 to Dec. 1901 Rodman and Chainman, Missouri & North Arkansas Ry. Co. TT 1.5. Jan. to Dec. 1902 Head Chainman and Rodman on relocation, Houston & Texas Central R. R. TT 1. Jan. to Sept. 1903 Instrumentman on construction, Missouri & North Arkansas R. R. TT 0.8. Sept. 1903 to Aug. 1904 Asst. Engr. in charge of construction, St. Louis, Memphis Southeastern R. R. TT 1: RC 1. Aug. 1904 to Dec. 1905 Engr. in charge of construction and maintenance, standard gauge railroad tracks, Federal Lead Co., Flat River, Mo. TT 1.2: RC 1.2. Dec. 1905 to Dec. 1906 and July 1908 to Dec. 1912 Asst. Engr., St. Louis & San Francisco Ry. Co., during latter period in charge of construction and maintenance, also Div. Engr. TT 5.5: RC 5.5. Dec. 1906 to July 1908 Highway Engr., Stoddard County, Mo., in charge of road construction. TT 1.5: RC 1.5. Jan. 1913 to Jan. 1914 Chf. Engr., Cape Girardeau & Northern R. R., in charge of operation and construction. TT 1: RC 1. Jan. 1914 to Aug. 1916 Div. Engr., St. Louis, Brownsville & Mexico Ry. Co., in charge of maintenance. TT 1.6: RC 1.6. Aug. 1916 to date Chf. Engr., Gulf Coast Lines, in charge of maintenance and construction. TT 8: RC 8. TT 23.1: RC 19.8. Refers to C. J. Howard, J. M. Howe, F. G. Jonah, J. C. McVea, J. S. Worley.

847 (13) KRAFFT, ROBERT FERDINAND, 364 Eddy St., San Francisco, Cal. (Age 36. Born Los Angeles, Cal.) 1907 to 1909 student, Civ. Eng. Coll., Univ. of Cal. May to Dec. 1909 Chainman, June 1910 to June 1911 Instrumentman, and March to June 1916 Inspector steel bridge construction, Western Pacific Ry. Co. TT 1.9: SP 1.9. June to Dec. 1911 Instrumentman, and April to Nov. 1912 Chf. of Party, transmission line location, Great Western Power Co. TT 1.1: SP 0.5: P 0.6: RC 0.6. Feb. to April 1912 and Feb. to April 1913 Draftsman, South San Joaquin Irrigation Dist. TT 0.4: SP 0.4. Dec. 1912 to Feb. 1913 Instrumentman, Oakland, Antioch and Eastern Ry. TT 0.2: SP 0.2. April 1913 to June 1914 Instrumentman and Res. Engr., Big Meadows Dam construction, and June to Dec. 1914 and June 1916 to April 1917 Chf. of Party, railroad preliminary and power project investigation and location, Great Western Power Co. TT 2.6: SP 0.5: P 2.1: RC 2.1: D 0.8. Dec. 1914 to May 1915 Res. Engr., in charge of construction, Western Canal Co. TT 0.4: P 0.4: RC 0.4. July to Nov. 1915 Instrumentman, San Joaquin Farm Lands Co. TT 0.5: SP 0.5. May to Aug. 1917 Instrumentman, Storrie Constr. Co., topography and ditch location, Las Vegas Project. TT 0.4: SP 0.4. Dec. 1917 to June 1918 Instrumentman and Res. Engr., Sawyer Bros., Engrs., Seattle, irrigation and municipal work. TT 0.6: SP 0.3: P 0.3: RC 0.3. July to Dec. 1918 Instrumentman and Chf. of Party on railway location, Spruce Production Div., U. S. A. TT 0.6: SP 0.4: P 0.2: RC 0.2. April to Sept. 1919 Draftsman on railway location, Great Western Power Co. TT 0.4: SP 0.4. Nov. 1919 to June 1920 Res. Engr. on irrigation construction work, E. C. Mills, Engr., Willows, Cal. TT 0.6: P 0.6: RC 0.6. July 1920 to May 1923 Field Engr. and Engr. in charge of construction, Yukon Gold Co. of New York, investigation, location and construction on hydro-electric development in British Malaya. TT 2.8: P 2.8: RC 2.8: D 1.8. Sept. to Nov. 1923 Asst. Engr., Richardson Constr. Co., preliminary work on dam construction, Yaqui river, Mexico. TT 0.2: P 0.2. Nov. 1923 to date Asst. Hydr. Engr., Great Western Power Co., special hydraulic studies, etc. TT 0.8: P 0.8: RC 0.8: D 0.8. TT 13.5: SP 5.5: P 8: RC 7.8: D 3.4. Refers to D. W. Albert, C. C. Cragin, W. G. Frost, P. W. Ham, L. C. Hill, J. M. Howells, J. H. Knowles, C. H. Lee, C. M. Mardel, F. J. O'Hara, R. W. Pommerer, P. H. Van Ethen, E. D. Vincent.

848 (11) LANE, GEORGE SAMUEL, 4834 West 17th St., Los Angeles, Cal. (Age 34. Born London, England.) March to Aug. 1907 Rodman and Chainman, Southern California Mountain Water Co. TT 0.5: SP 0.5. Sept. 1907 to Sept. 1908 Rodman and Chainman on survey of

Indian Pueblo Lands, re-establishing boundary lines and high tide line. *TT 1: SP 1.* Feb. 1909 to March 1910 Axeman, Chainman and Rodman, San Diego & Arizona R. R. survey. *TT 1.1: SP 1.1* March 1910 to Feb. 1911 Rodman and Instrumentman M. of W. Southern Pacific R. R., Tucson Div., Arizona. *TT 0.9: SP 0.9.* Feb. 1911 to Jan. 1912 Rodman, Chainman, Instrumentman and Computer, San Joaquin Highway Comm.; completed course in surveying and mapping, International Correspondence School. *TT 0.9: SP 0.9.* May to Oct. 1912 Instrumentman, topographical surveys and general city practice. *TT 0.5: SP 0.5.* Oct. 1912 to Nov. 1913 Field and Office Draftsman, Constr. Photographer, Stone & Webster Constr. Co., 150 000 V transmission line construction. *TT 1.1: SP 1.1.* Feb. 1914 to July 1917 Office Draftsman, Pacific Light & Power Corporation, on revaluation and statistical work. *TT 3.5: SP 3.5.* July 1917 to March 1919 U. S. Navy Gunners' Mate 1 cl. and Ensign. *TT 1.7: SP 1.7.* March to Nov. 1919 Asst. Designer of high-power crossings, Southern California Edison Co. (which absorbed the Pacific Light and Power Co.). *TT 0.8: SP 0.8.* Nov. 1919 to date Draftsman, Union Oil Co. of California, in charge of field parties, record work, calculation of earth work and compilation of reports, Squad Leader for Mapping Dept. *TT 4.9: SP 1: P 3.9: RC 3.9.* *TT 16.9: SP 13: P 3.9: RC 3.9.* Refers to D. F. Black, G. H. Brown, C. A. Friedmann, L. B. Harris, F. W. Karge, R. J. Reed.

849 (8) LARSEN, HAROLD THEODORE, 419 W. Main St., Urbana, Ill. (Age 27. Born Portland, Me.) 1923 B. S., Univ. of Ill. April 1915 to May 1916 Rodman, Daboll & Crandall, New London, Conn., municipal engineering, surveying, etc. *TT 3.1: SP 3.1.* May 1916 to Aug. 1917 Chainman, and Aug. 1917 to Aug. 1918 Leveler, New York, New Haven & Hartford R. R. Co., also some inspection. *TT 2.2: SP 1.7: P 0.5.* Aug. 1918 to Aug. 1919 with U. S. Army M. D., Private (2 months), Corporal (4 months), and Sergeant (6 months), transportation of wounded. Sept. 1919 to June 1923 student, Coll. of Eng., Univ. of Illinois. Sept. 1920 to Aug. 1924 Statistician, Univ. of Illinois, Health Service Station (part of time). Aug. to Sept. 1922 (vacation) Inspector, Village of Ashkum, Ill., on concrete road construction. June to Dec. 1923 Rodman, Illinois Central R. R. Co., and since Dec. 1923 Bldg. Inspector for Company on passenger station construction, layout and inspection of steel work, concrete foundation work, sanitary and storm sewer systems, brick pavements, heating and plumbing, interlocking tower, monthly and final estimates. *TT 1.2: SP 1.2.* *TT 6.5: SP 6: P 0.5.* Refers to H. Cross, F. R. Judd, C. R. Richards, L. C. Rogers, P. B. Spencer, J.-Vawter, C. C. Williams.

850 (10) LASSITER, LEROY IRVING, 213 E. Hargett St., Raleigh, N. C. (Age 28. Born Rich Square, N. C.) 1924 B. S., Univ. of N. C. *TT 2: SP 2.* Refers to G. M. Braune, B. S. Drane, H. W. Durham, T. F. Hickerson, T. Saville.

851 (1) LOEHNINGER, FERDINAND TRUESDELL, 56 Mannheim St., Elmhurst, N. Y. (Age 35. Born Dayton, Ohio.) 1913 B. S., Rose Pol. Inst. May 1907 to Sept. 1908 and June to Sept. 1910 Transitman, American Bridge Co. June to Sept. 1911 Inspector of street paving, City of Dayton, Ohio. June to Sept. 1912 Detailer of structural steelwork, F. O. Duval Co., Indianapolis, Ind. *TT 3.4: SP 3.4.* June 1913 to Jan. 1915 Transitman in charge of Constr. Corps, New York Connecting R. R., in charge of location and inspection of foundations and substructure of main span and Ward's Island Viaduct, Hell Gate Bridge. *TT 1.6: P 1.6.* June 1915 to March 1919 Jun. Engr., Grade 8, Public Service Comm., 1st Dist., Shift Engr. in charge of construction, Whitehall St. East River Tunnels; Chf. of Alignment Corps, 14th St. East River Tunnels. *TT 3.8: P 3.8: RC 3.8.* March 1919 to April 1923 Designer and Estimator of structural steelwork for buildings, Geo. A. Just Co., Long Island City, N. Y. *TT 4.1: P 4.1: RC 3: D 3.* April 1923 to date Designing Engr. of steel structures and foundations, with Chas. Mayer, Cons. Engr. *TT 1.4: P 1.4: RC 1.4: D 1.4.* *TT 14.3: SP 3.4: P 10.9: RC 8.2: D 4.4.* Refers to D. W. Coe, M. H. Freeman, C. S. Gleim, C. M. Holland, J. B. Snow.

852 (14) MANSON, EGBERT FARRAND, 1019 F St., Fairbury, Nebr. (Age 45. Born Milwaukee, Wis.) 1906 B. S., Northwestern Univ. July to Sept. 1906 Draftsman, Water Dept., City of Evanston, Ill., laying out water main extension and house connections on plots, and lake intake design with machinery to handle intake gratings. *TT 2.3: SP 2.2: P 0.1: D 0.1.* Nov. 1906 to Nov. 1909 with St. Paul & Des Moines Ry. as Draftsman platting profile field notes, map data and laying grade line (8 months); Instrumentman (10 months); Asst. Engr. in entire charge of rail laying and ballasting forty-five miles of new road (4 months); and Res. Engr. in construction of five concrete bridges, including Iowa River Bridge (three 100-ft. and two 40-ft. D P girders on 50-ft. concrete piers and abutments). *TT 3.1: SP 1.5: P 1.6: RC 1.6.* Dec. 1909 to May 1911 Instrumentman,

Illinois Central R. R., on maintenance work. *TT 1.5: SP 1.5.* June 1911 to date with Chicago, Rock Island & Pacific Ry. as Asst. Engr., laying out yards, industry tracks, ballast work, etc. (1½ years); Office Engr., and Engr. M. of W., yard design, special track work, etc. (2½ years); Pilot Engr. representing railway on structural inventory with I. C. C. Party (1 year); Master Carpenter in charge of bridge and building work on division (1½ years); Special Engr. conducting special investigations for Chf. Engr., had charge of all new test track appliances and made reports thereon, etc. (3½ years); at present Div. Engr. in charge of track maintenance on division (1 year). *TT 13.3: P 13.3: RC 11.6: D 1.7. TT 20.2: SP 5.2: P 15: RC 13.2: D 1.8.* Refers to J. G. Bloom, R. H. P. Ford, T. R. Hasley, P. M. LaBach, H. T. Livingston, C. A. Morse, C. P. Richardson.

853 (3) NASH, EDWARD EUGENE, Sand Lake, New York. (Age 24. Born Watervliet, N. Y.) 1924 C. E., Rens. Pol. Inst. June to Aug. 1923 Jun. Asst. Engr., Grade I, New York State Highway Dept., Inspector of macadam road construction. *TT 2: SP 2.* Refers to E. R. Cary, L. W. Clark, T. R. Lawson, W. P. Mason, P. C. Ricketts.

854 (1) NOACK, ARTHUR, P. O. Box 87, Garfield, N. J. (Age 43. Born Stettin, Germany.) 1903 graduated, Landwirtschaftliche Hochschule, Berlin, passing government examinations for higher technical government service in Germany. April 1903 to Aug. 1907 in charge of survey party on triangulation and consolidation work; Res. Engr. in charge of general and special preliminaries for railroad and canal construction; preliminaries and design for municipal and agricultural drainage, Eisenbahndirection, Stettin, Kanalbaudirection, Hannover, Germany. *TT 4.3: RC 3.3: D 1.* Sept. 1907 to Oct. 1908 Computer, Chf. of Party with Wise and Watson, Passaic, N. J. *TT 1.1:* Oct. 1908 to Sept. 1909 Engr.-in-Chg., Forstmann-Huffmann Co., Garfield, in responsible charge of construction of \$500 000 worsted mills. *TT 0.9: RC 0.8: D 0.1.* Sept. 1909 to June 1911 Engr. and Supt., Union Building and Constr. Co., Passaic, in charge of contract work, pavements, sewers (amounting to about \$200 000). *TT 1.8: RC 1.8.* June 1911 to Sept. 1912 Chf. Inspector, Borough of Garfield, in charge of construction of Borough Sewer System (contract \$215 000). *TT 1.3: RC 1.3.* Sept. 1912 to May 1916 Inspector, Passaic Valley Sewerage Comm. *TT 3.6.* May 1916 to date Engr. of Highways, County of Bergen, in responsible charge of design and construction of bridges, roads and sewers (work designed and constructed to date nearly \$3 000 000): Jan. 1924 to date also Borough Engr. of New Milford, work designed and constructed \$125 000. *TT 8.2: RC 7: D 1.2. TT 21.2: RC 14.2: D 2.3.* Refers to S. W. McClave, F. A. Reimer, W. G. Taylor, J. R. Van Duyne, T. J. Wasser, R. S. Wise.

855 (2) PARKER, EDWIN STONE, 30 Upland Rd., Brookline, Mass. (Age 36. Born Minneapolis, Minn.) 1909 to 1911 Student, Eng. School (2 years), also at Summer Surveying Camp, Univ. of California. *TT 0.8: SP 0.8.* May 1917 to July 1918 Architectural Draftsman and finally in charge of office, with H. F. Kellogg, Archt., Boston, Mass. *TT 1.2: SP 0.7: P 0.5.* Nov. 1918 to May 1923 (except 4 months in 1919 on work for Boston Post) Engr. for McLaughlin & Burr, Archts., Boston, designed their structural work, inspected construction and made plumbing plans. *TT 4.2: SP 0.5: P 3.7: RC 2.2.* May 1923 to May 1924 (except 3 months) Steel Designer for Stone & Webster. *TT 0.7: SP 0.2: P 0.5: RC 0.5.* Since Jan. 1921 on work for Boston Post, consisting of extensive alterations (while with McLaughlin & Burr) and supervised their work (while with Stone & Webster); since then has entire charge for them. *TT 0.2: P 0.2: D 0.2.* At present also on private work with J. E. Hanlon, Boston. *TT 7.1: SP 2.2: P 4.9: RC 2.7: D 0.2.* Refers to C. R. Berry, E. H. Cameron, A. G. Cherry, W. W. Clifford, W. D. Henderson, E. D. Mortenson, E. A. Norwood, A. V. A. Swift.

856 (1) PEREZ, SANTIAGO VICTOR, Lealtad 110, Havana, Cuba. (Age 23. Born Havana, Cuba.) 1924 B. S. C. E., Mich. Univ. *TT 2: SP 2.* Refers to A. H. Blanchard, J. Cissel, L. M. Gram, H. E. Riggs, R. S. Swinton.

857 (1) PHILLIPS, CUSHING, Gonaves, Haiti, Care, Postmaster, N. Y. (Age 29. Born Brooklyn, N. Y.) 1917 C. E., Cornell Univ. July to Sept. 1914 Axeman, Palisades Interstate Park Comm., surveying, some transit work, drafting, reports. July to Sept. 1916 Inspector, New York Public Service Comm., First Dist., on East River tunnel. *TT 2: SP 2.* April 1917 to June 1919 Seaman, Ensign, U. S. N. R. F., Ensign (T) and Lieut. (J. g.) (T), U. S. Navy (no engineering work). Aug. 1919 Draftsman, Turner Constr. Co. *TT 0.1: SP 0.1.* Sept. to Nov. 1919 on concrete construction for his father, F. B. Phillips. *TT 0.2: P 0.2.* Nov. 1919 to April 1921 Jun. Asst. Engr., New York State Highway Dept., Poughkeepsie Div., inspection of paying by contractors for state, and designing and estimating projected roads. *TT 1.5: RC 1.5.* April 1921 to Oct. 1922 Lieut. (J. g.) (C. E. C.), U. S. N., about

one month instruction at Naval Academy (not engineering work), then Asst. to Public Works Officer, Norfolk Navy Yard, in charge of work by yard labor and transportation. *TT 1.5: P 1.5: RC 1.5: D 0.1.* Oct. 1922 to date Lieut. (C. E. C.), U. S. N., 1½ years Public Works Officer, Marine Barracks, Parris Island, S. C., responsible charge of construction and repair work and power plants, since April 1924 Dept. Engr. of the Northwest and Artibonite, Haiti, in responsible charge of road, building, telephone and hydraulic work. *TT 1.7: P 1.7: RC 1.7: D 0.3.* *TT 7: SP 3.6: P 3.4: RC 3.2: D 0.4.* Refers to R. E. Bakenhus, L. E. Gregory, E. E. Haskell, A. A. L. Ort, A. L. Parsons, R. L. Pettigrew, D. C. Webb.

858 (8) PINEL, STANLEY IVEN, 1005 North Main St., Bloomington, Ill. (Age 27. Born Kalamazoo, Mich.) 1921 B. S. in C. E., Univ. of Mich. Feb. to July 1918 Draftsman and Rodman, City of Flint, Mich., on pavements and sewers. *TT 2.5: SP 2.5.* July to Dec. 1918 with U. S. Army, not engineering work. Dec. 1918 to Oct. 1919 Draftsman, Buick Motor Co., Flint, drawing and designing jigs, dies and special machinery, also considerable factory layout work. *TT 0.7: SP 0.7: D 0.4.* Oct. 1919 to Jan. 1921 (while student, Univ. of Mich., and summer 1920) with Hoad and Decker, Cons. Engrs., Ann Arbor, Mich., as Draftsman and Detailer on water-works structures and sewer systems; Jan. 1921 to Jan. 1922 Asst. Engr., Hoad and Decker, on design of hydraulic and sanitary structures, which required considerable reinforced concrete and steel design. *TT 1: P 1: RC 1: D 1.* Jan. to Nov. 1922 Asst. City Engr., Bluefield, W. Va., under City Mgr., had management and responsibility of all office work, including design of large sewer and pavement program. *TT 0.8: P 0.8: RC 0.8: D 0.8.* Nov. 1922 to April 1924 San. Engr., Eng. Extension Dept., Iowa State Coll. consultation work with various municipalities in the state, research in engineering work, and writing articles and papers for publication as official bulletins of the college. *TT 1.5: P 1.5: RC 1.5: D 0.5.* April to Aug. 1924 Prin. Asst. Engr., Taylor and Woltmann, Cons. Engrs., Bloomington, Ill., having practically full responsibility for design of large sewage-treatment plant for a city of 45 000. *TT 0.4: P 0.4: RC 0.4: D 0.4.* *TT 6.9: SP 3.2: P 3.7: RC 3.7: D 3.1.* Refers to E. C. Barton, A. J. Decker, W. Drury, W. C. Hoad, C. E. Ridley, R. S. Wallis, J. J. Woltmann.

859 (1) PLATTE, FREDERICK ADOLPH, 1610 University Ave., New York City. (Age 27. Born College Point, N. Y.) 1918 U. S. Mil. Acad. Nov. 1918 to Nov. 1920 2d Lieut. and 1st Lieut., Corps of Engrs., U. S. Army, until June 1920 as Student Officer, Engr. School, then Battalion Commander and Asst. Div. Engr., 4th Engrs. *TT 3.1: SP 3.1.* Jan. to July 1921 with Bond Dept., H. L. Doherty & Co., New York City, not on engineering work, July 1921 to date Instructor in Mechanics, School of Mines, Eng. and Chemistry, Columbia Univ. *TT 3: P 3.* *TT 6.1: SP 3.1: P 3.* Refers to A. H. Beyer, R. D. Black, F. M. S. Johnson, W. J. Krefeld, E. B. Lovell.

860 (14) ROACH, ALDEN GALLUP, Valentino Apartments, St. Louis, Mo. (Age 23. Born St. Louis, Mo.) 1923 B. S., Illinois Univ. June to Sept. 1918 Rodman, and April to Sept. 1921 Ballast Inspector, Wabash R. R. June to Sept. 1919 Instrumentman, Industrial Track Constr. Co. June to Sept. 1920 Asst. Engr., Alton & Southern R. R. *TT 2.4.* Sept. 1921 to Sept. 1922 Rodman and Instrumentman, and Aug. 1923 to March 1924 Transitman, Missouri Pacific R. R. *TT 1.6: RC 0.9: D 0.2.* June to Aug. 1923 Draftsman, Union Pacific R. R. *TT 0.2.* March 1924 to date Plant Engr. of Rolling Mill Plant at Alton, Laclede Steel Co. of St. Louis. *TT 0.5: RC 0.5: D 0.5.* *TT 4.7: RC 1.4: D 0.7.* Refers to B. L. Brown, E. A. Hadley, R. H. Howard, A. N. Talbot, C. C. Williams.

861 (14) ROACH, HARRY FAY, 1430 Syndicate Trust Bldg., St. Louis, Mo. (Age 53. Born St. Louis, Mo.) Sept. 1891 to July 1902 with his father, H. E. Roach, at St. Louis, Mo., in private practice of architecture, designed and supervised construction of the Brown Bldg. (steel, cost \$350 000), Sunlight Factory for Hamilton & Brown Shoe Co. (cost \$150 000), 8-story building, southeast corner 12th and Olive (slow combustion, cost \$175 000) and numerous residences in St. Louis (cost \$15 000 to \$75 000). *TT 10.7: RC 10.7: D 10.7.* July 1902 to date in private practice as Archt., at St. Louis, designed and supervised construction of Times Bldg. and Syndicate Trust Bldg. (both steel frame, cost \$300 000 and \$2 000 000), Scruggs Vandevort Barney Annex (12 stories, reinforced concrete, cost \$175 000) and numerous others less important. *TT 22.2: RC 22.2: D 22.2.* *TT 32.9: RC 32.9: D 32.9.* Refers to B. L. Brown, F. G. Jonah, E. R. Kinsey, H. J. Pfeifer, C. D. Purdon, H. Rush, H. P. Taussig.

862 (9) ROGERS, HOMER LEE, 267 Parkway Ave., Hartwell, Cincinnati, Ohio. (Age 30. Born Greenville, Ohio.) Jan. to Mar. 1917 Draftsman on flood prevention work, Miami Conservancy Dist., Dayton, Ohio. *TT 0.3: SP 0.3.* April to June 1917 with U. S. Army.

TT 0.2: SP 0.2. June 1917 to Feb. 1919 Computer and Draftsman, and Feb. 1919 to Nov. 1922 Office Engr. in charge of estimates, working drawings, design, etc., office administration, Miami Conservancy Dist. **TT 5.4: SP 1.5: P 3.9: RC 3.9.** Dec. 1922 to date with The Philip Carey Co., Lockland, Cincinnati, until June 1923 as Mgr. of department devoted to application of graphical methods to business problems; then for 1 year Mgr. of Asbestos Roofing and Shingle Dept. and since June 1924 Mgr. of Rall Filler Dept., on technical work having to do with track construction and paving problems. **TT 1.8: SP 1: P 0.8: RC 0.8.** **TT 7.7: SP 3: P 4.7: RC 4.7.** Refers to C. S. Bennet, C. A. Bock, E. L. Chandler, C. H. Eifert, O. Froseth, C. H. Paul, C. H. Shea.

863 (13) SHARP, HAROLD GIBBONS, 501 Rialto Bldg., San Francisco, Cal. (Age 40. Born San Francisco, Cal.) 1906 B. S., Univ. of Cal. June 1906 to June 1907 Draftsman, Eng. Dept., Southern Pacific R. R. Co., tracing, drafting, mapping, estimating, etc. **TT 3: SP 3.** July 1907 to June 1909 Draftsman, Inspector, Instrumentman and Supt. of Constr., Pacific Gas and Elec. Co., San Francisco, sub-station and other building design and engineering in connection with construction. **TT 2: SP 1: P 1.** June 1909 to Nov. 1913 Engr. and Estimator, Duncanson Harrelson Co., Gen. Contrs., quantity and cost estimates for bidding, some design, Supt. on construction work. **TT 4.4: P 4.4: RC 2: D 0.4.** Nov. 1913 to March 1914 Asst. Engr., P. P. I. E., inspection of construction work. **TT 0.3: P 0.3.** March 1914 to Feb. 1915 Supt. of Constr. with J. D. Hanah, Gen. Contr., in charge of construction of Fine Arts Palace for contractor. **TT 0.9: P 0.9: RC 0.9.** Feb. 1915 to Jan. 1916 Chf. Engr., Duncanson-Harrelson Co., in charge of estimating and construction. **TT 0.9: P 0.9: RC 0.9.** Jan. 1916 to Jan. 1918 Asst. Engr., Great Western Power Co., San Francisco, designing and in charge of surveys and construction. **TT 2: P 2: RC 1: D 1.** Jan. 1918 to Jan. 1919 Engr. with L. S. Rosener, Cons. Engr., handled all business in office in connection with building of new ship yard for Moore Shipbuilding Co., including buying machinery, letting contracts, etc. **TT 1: P 1.** Jan. to Feb. 1919 Engr. with M. C. Couchot, Cons. Engr., design reinforced concrete and making estimates. **TT 0.2: P 0.2.** Feb. 1919 to June 1921 Engr., Great Western Power Co., San Francisco, designing and construction work, in charge of building Caribana Valona Transmission Line (steel tower line). **TT 2.3: P 2.3: RC 1: D 1.3.** July 1921 to Aug. 1922 Asst. Engr., California-Oregon Power Co., reconnaissance, reports, surveys, etc., and some design. **TT 1.2: P 1.2: RC 1: D 0.2.** Aug. 1922 to date Constr. Engr. and Sales Engr., Pacific Coast Steel Co., Tower Dept., Supt. of Constr. on new tower building and plant, and later in charge of sales in Tower Dept. **TT 2: P 2: RC 1.5: D 0.5.** **TT 20.2: SP 4: P 16.2: RC 8.3: D 3.4.** Refers to F. G. Baum, J. R. Cahill, O. W. Degen, H. D. Dewell, R. G. Doering, D. H. Duncanson, P. W. Ham, L. R. Jorgensen, C. M. Mardel, L. S. Rosener, I. C. Steele, H. C. Vensano.

864 (3) SHEEHAN, WILLIAM FRANCIS, 72 Delaware St., Tonawanda, N. Y. (Age 32. Born Mechanicsville, N. Y.) April 1911 to June 1917 Axeman, Chairman, Office Asst. and Jun. Asst. Engr., New York State Highway Dept., survey, design and construction of roads and pavements. **TT 6.2: SP 5.6: P 0.6: RC 0.6.** June 1917 to Feb. 1918 Transitman, New York Central R. R., in charge of Survey Party on location. **TT 0.7: P 0.7: RC 0.7.** Feb. to Sept. 1918 Draftsman, Curtiss Aeroplane Co., structural and mechanical drafting in plant and production engineering work. **TT 0.7: SP 0.7.** Sept. 1918 to Aug. 1919 Field Engr., American Brass Co., general field and plant engineering covering mill construction, installation of heavy machinery, railroad spurs and sidings, sewer and water-work construction and general surveying. **TT 0.9: P 0.9: RC 0.9.** Aug. 1919 to Dec. 1920 Civ. Engr., Beaver Board Companies, in charge of construction of mill and office buildings, installation of paper mill machinery, surveys of industrial plants for valuation, and general plant engineering. **TT 1.4: P 1.4: RC 1.4.** Jan. 1921 to June 1923 in private practice surveying. **TT 2.4: P 2.4: RC 2.4.** June 1923 to date Res. Engr. for Geo. C. Diehl, Buffalo, N. Y., in responsible charge of design and construction of Highways, sewers, drains, bridges, directing field parties in surveying, water and sanitary projects. **TT 1.1: P 1.1: RC 1.1.** **TT 13.4: SP 6.3: P 7.1: RC 7.1: D 1.1.** Refers to J. W. Darling, G. C. Diehl, C. H. Snyder, G. F. Unger, B. H. Wait.

865 (7) SHEPPARD, ELWYN BURTON, Y. M. C. A., Grand Rapids, Mich. (Age 26. Born Buffalo, N. Y.) 1924 B. S. in C. E., Univ. of Mich. July 1924 to date Asst. Appraisal Engr. with Spooner & Merrill, on appraisals of public utilities. **TT 2.2: SP 2.2.** Refers to A. J. Decker, L. M. Gram, W. C. Hoad, H. W. King, H. E. Riggs, C. W. Spooner, C. O. Wisler.

866 (2) SLOTNIK, ISIDOR, 10 Lawrence St., Chelsea, Mass. (Age 26. Born Chelsea, Mass.) 1919 B. S., Mass. Inst. Tech., also completed Intensive Course in Naval Arch. and Marine Eng. June 1919 to date with J. Slotnik Co., Contrs., Chelsea, Mass., until June 1921

as Constr. Engr., and since then member of firm. March 1921 to date also member of firm, Acme Smelting Co., Chelsea, refiners and smelters of non-ferrous metals. *TT 7: SP 2: P 5: RC 5.* Refers to C. B. Breed, L. C. Gustin, E. Mirabelli, E. D. Mortenson, C. M. Spofford.

867 (10) SMOCK, WILLIAM FRANKLIN, P. O. Box 1007, St. Augustine, Fla. (Age 22. Born Harrodsburg, Ky.) July 1918 to April 1919 Inspector, M. of W. Dept., Southern Ry. System; Rodman on surveys, etc. *TT 0.9: SP 0.9.* June to Sept. 1919 Rodman and Draftsman, Pratt Consolidated Coal Co.; also Levelman. *TT 0.3: SP 0.3.* Feb. to March 1920 Rodman, Chicago, Burlington & Quincy R. R. Co. *TT 0.1: SP 0.1.* March 1920 to May 1922 Jun. Engr., M. of W., S. Ry. System, gave pile cut-offs on bridges, staked out tracks, made property surveys, located pipe-line crossings and did general maintenance drafting. *TT 2.1: SP 2.1.* May 1922 to Sept. 1923 Transitman, Florida East Coast Ry. Co., acted as Chf. of Party in absence of Locating Engr.; also on construction. *TT 1.3: SP 0.9: P 0.4.* Oct. 1923 to Feb. 1924 Jun. Draftsman, Union Gas & Elec. Co., looking up property, staking out property and buildings and miscellaneous surveys. *TT 0.3: P 0.3.* Feb. to April 1924 Instrumentman, Chesapeake & Ohio Ry. Co. *TT 0.1: P 0.1.* April 1924 to date Instrumentman, F. E. C. Ry. Co., double-track construction and surveys. *TT 0.4: P 0.4.* *TT 5.4: SP 4.2: P 1.2.* Refers to J. J. Gantt, J. A. Higgs, Jr., O. B. Lackey, H. N. Rodenbaugh, H. E. Tyrrell.

868 (3) SPERRY, EARL EUGENE, 849 Livingston Ave., Syracuse, N. Y. (Age 41. Born West Monroe, N. Y.) 1904 C. E., Rens. Pol. Inst. July 1904 to date with The Solvay Process Co., Syracuse, N. Y. as follows: July 1904 to March 1909 in Civ. Eng. Dept. on surveys, drafting, designing mostly in connection with stone quarry, plants, water and brine systems and railroad construction and maintenance; March 1909 to Oct. 1921 Asst. Civ. Engr., in charge of field work (engineering), also in charge of design of quarry plants (1000 to 4000 tons of crushed rock per day), water and sewer systems, etc., also brine wells; Oct. 1921 to July 1924 Mgr., Limestone & Brine Supply Dept.; Department includes operation of large stone quarry with crushing plant (quarry equipment includes several steam shovels and locomotives), brine wells, operation and maintenance, also steam power plant, pipe-lines (air, water and brine), deep well drilling, etc., operation and maintenance of plant railroads, plant water and sewer systems; July 1924 to date Engr. on this class of work. *TT 30.1: RC 10.7: D 7.6.* Refers to H. B. Brewster, H. N. Cole, M. J. French, G. D. Holmes, W. P. Mason, P. C. Ricketts, C. H. Thompson.

869 (13) THOMAS, CHARLES HOWARD, 2507 Woolsey St., Berkeley, Cal. (Age 43. Born Philadelphia, Pa.) Sept. 1900 to May 1909 and Feb. to June 1920 with Byron Jackson Iron Works of San Francisco and Berkeley, Cal., as Draftsman on design and testing of pumping and dredging machinery, in charge of Dredge Dept. of Design for 3 years. *TT 9: RC 3: D 6.4.* May 1909 to Nov. 1916 with Oakland (Cal.) Faving Co., as Timekeeper (1 year), Asst. Supt. (3 years) and Supt. and Engr. (3½ years), in charge of construction, estimating, contracts, purchasing and equipment for concrete, macadam and asphalt paving. *TT 7.4: RC 3.8.* Nov. 1916 to Dec. 1917 Draftsman, Eng. Dept., Moore Shipbuilding Co., Oakland, Cal., on piping and ship engine room design. *TT 1: D 1.* Dec. 1917 to April 1918 contracting at Modesto, Cal. *TT 0.3.* April to Nov. 1918 Special Clerk, Standard Oil Co. at Modesto and Stockton, Cal., handling and in charge of statistics and contracts. *TT 0.6: RC 0.6.* Nov. 1918 to July 1919 Asst. Supt. of Streets, City of Berkeley, in charge of maintenance, repair, reconstruction and cleaning of asphalt, concrete and oil macadam streets and sewers. *TT 0.7: RC 0.7.* July to Nov. 1919 Draftsman, Union Constr. Co., Shipbuilders, Oakland, on piping and ship engine room design. *TT 0.3: D 0.3.* Nov. 1919 to Feb. 1920 with Spears-Wells Machinery Co., Oakland, as Sales Engr. on road machinery. *TT 0.2.* June 1920 to March 1924 with C. C. Kennedy, Cons. Engr., San Francisco, on design, field work and inspection (1½ years in charge of design) of pavements, sewers, bridges; Res. Engr. at San Anselmo, Cal., ½ year in charge of construction of sewers, paving and concrete bridges. *TT 2.7: RC 2: D 3.* March 1924 to date Asst. Supt. of Streets, City of Berkeley, Cal., in charge of maintenance, repair, reconstruction of streets, sewers and bridges. *TT 0.4: RC 0.4.* *TT 23.8: RC 10.4: D 10.8.* Refers to A. J. Eddy, J. N. Eddy, E. A. Ingham, J. J. Jessup, C. C. Kennedy, E. N. Prouty, C. A. Spears.

870 (15) THOMAS, RODERIC BRUCE, 1107 Mercantile Bank Bldg., Dallas, Tex. (Age 23. Born Dallas, Tex.) 1922 B. S., Agri. and Mech. Coll. of Tex. June 1922 to June 1924 Rodman, Instrumentman and Field Engr. with Myers & Noyes, general municipal work, such as water, sewer, pavement, surveys, etc. *TT 4: SP 3: P 1: RC 0.7.* Refers to C. T. Baer, E. L. Myers, J. C. Nagle, E. N. Noyes, R. W. Willard.

871 (1) WATSON, WILLIAM FRANCIS, Hotel Astor, New York City. (Age 27. Born Brisbane, Australia.) 1924 B. E., Sydney Univ. 1922 to 1923 Junior Asst., Dept. of Public Works, N. S. W., Australia, design, survey and supervision of construction. *TT 2: SP 2.* Refers to P. Allan, C. F. Blain, A. J. R. Frew, W. A. Miller, W. H. Warren.

872 (6) WELSH, WILLIAM ALBERT, 1013 Fulton Bldg., Pittsburgh, Pa. (Age 39. Born Chester, Pa.) 1900 to 1913 Detailer, Checker and Squad Foreman on structural steel shop details with Virginia Bridge Co., Roanoke, Va., Hinkle Iron Works, Post & McCord, and Milliken Bros., New York City, and American Bridge Co., New York City and Philadelphia, and several other firms for short periods. *TT 13: SP 11: P 2: RC 2: D 1.* Jan. 1913 to March 1914 Chf. Draftsman with Warren A. Tyrrell, St. Louis, Mo. *TT 1.2: P 1.2: RC 1.2: D 1.2.* March 1914 to April 1915 Chf. Draftsman, Westcott Eng. Co., Chicago, Ill. *TT 1.1: P 1.1: RC 1.1: D 1.1.* April 1915 to Sept. 1917 Draftsman, American Bridge Co., Pencoyd, and Summers Eng. Co., Pittsburgh, Pa. *TT 2.4: P 2.4: RC 2.4.* Sept. 1917 to March 1922 Chf. Draftsman, Lackawanna Bridge Co., Buffalo, N. Y. *TT 4.5: P 4.5: RC 4.5: D 4.5.* March to Sept. 1922 Chf. Draftsman, Ingalls Iron Works Co., Birmingham, Ala. *TT 0.5: P 0.5: RC 0.5: D 0.5.* Sept. 1922 to July 1924 member of firm, Sheldon & Welsh, Structural Engrs., Pittsburgh, Pa., on designs, details and estimates. *TT 1.8: P 1.8: RC 1.8: D 1.8.* *TT 24.5: SP 11: P 13.5: RC 13.5: D 10.1.* Refers to W. A. Courtenay, Jr., L. D. Draper, W. A. Hazard, E. McCullough, E. S. Risler, P. M. Sax, W. J. Sheldon.

873 (1) WHITE, JOHN COMLY, 150 North Munn Ave., East Orange, N. J. (Age 31. Born Lansdowne, Pa.) Registered Prof. Engr. in Pennsylvania. 1915 A. B., Swarthmore Coll. Summers 1913 and 1914 Timekeeper and Asst. to Supt., Barclay White & Co., Philadelphia, Pa., on concrete building construction. *TT 0.5: SP 0.5.* June 1915 to Dec. 1916 Detailer and Timekeeper, Shoemaker Bridge Co., Pottstown, Pa., on structural steel erection. *TT 1.5: SP 1.5.* March to July 1917 Draftsman and Designer, Fred A. Havens & Co., Philadelphia, detailing and design on steel and timber construction. *TT 0.4: SP 0.4.* Aug. 1917 to March 1918 Draftsman and Designer, Merchant Shipbuilding Corp., Bristol, Pa., drafting, design and supervision of drafting room, steel and concrete shipyard and building construction. *TT 0.7: SP 0.2: P 0.5: RC 0.4: D 0.3.* April 1918 to July 1919 Private and Master Engr. (Jun. grade), Co. A, 33d Regt. Engrs., and Section Engr.'s Office, Intermediate Sec. (East), A. E. F., laboring, surveying and drafting, railroad and general construction. *TT 1.2: SP 1: P 0.2.* Aug. 1919 to April 1920 Gen. Mgr., Philadelphia Realty and Construction Co., Philadelphia, planning and construction of small apartment house. *TT 0.8: P 0.8: RC 0.8.* May 1920 to June 1921 Draftsman and Office Engr., Stone & Webster, Inc., form drafting and miscellaneous job-office and outside work in construction of Delaware Station, Philadelphia Elec. Co. *TT 1.1: P 1.1.* July 1921 to April 1922 several miscellaneous engagements including erection of doors in power stations, design and detailing of heavy concrete work, and job-office construction work. *TT 0.8: P 0.8.* April 1922 to April 1924 Asst. to Structural Engr., McClellan & Junkerfeld, Inc., New York City, on design and construction of Cahokia Power Station, St. Louis. *TT 2: P 2: RC 1.5: D 0.3.* April 1924 to date Eastern Licensee, Arrowhead Iron Works, Inc., Kansas City, Mo., complete charge of sales, detailing and fabrication of arrowhead floor grating and stair treads in Eastern United States. *TT 0.4: P 0.4: RC 0.4.* *TT 9.4: SP 3.6: P 5.8: RC 3.1: D 0.6.* Refers to R. W. Atwater, H. T. Campton, J. H. Fichthorn, E. P. Palmer, D. H. Plank, B. White, E. M. Young.

874 (11) WILLIAMS, LEON G, City Engr.'s Office, Long Beach, Cal. (Age 30. Born Fox Lake, Wis.) 1918 B. S. in Civ. Eng., Iowa State Coll. June 1915 to Sept. 1916 and June to Sept. 1917 Rodman, Instrumentman and Chf. of Party for H. D. Keerl, Omaha, Nebr., topographic surveys and mapping of drainage basins, design and supervision of construction of county drainage projects in northern Iowa, municipal sewer and pavement construction. *TT 3.6: SP 2.9: P 0.7: RC 0.3: D 0.4.* Sept. to Oct. 1917 Chf. of Party, Big Stone County, Minn., survey, mapping and design of small county drainage district. *TT 0.1: P 0.1.* April to Dec. 1918 in Coast Artillery Corps, U. S. Army, first as Private and after Sept. 1918 as 2d Lieut. Instructor of Orientation, Officers' Training Camp, Coast Artillery School, Ft. Monroe, Va. *TT 0.7: SP 0.5: P 0.2.* Dec. 1918 to Sept. 1919 Foreman for R. S. Morrow, Dredging Contr., excavation and construction of reinforced concrete headwalls and drop spillways in open ditch and tile drain construction. *TT 0.8: P 0.8: RC 0.8.* Oct. 1919 to July 1920 Asst. Engr., Iowa Eng. Experiment Station (two-thirds of time), hydraulic investigations in laboratory and field pertinent to land drainage and storm-water run-off; post-graduate study in hydraulics and sanitation (one-third of time). *TT 0.8: P 0.8: RC 0.2: D 0.1.* Aug. to Oct. 1920 Asst. Engr. for W. E. Buell, Municipal Engr.; Res. Engr. on water-works and sewerage construction. *TT 0.3: P 0.3: RC 0.2.* Nov. 1920 to Dec.

1923 Jun. Asst. San Engr., U. S. Public Health Service, hydrometric studies made as part of an investigation of pollution and natural purification of Illinois River; analytical study of general problem of stream purification. TT 3.2: P 3.2: RC 1.5: D 0.2. Jan. 1924 to date Class A Draftsman, Sewerage Dept., Long Beach, Cal., design and supervision of construction of sewage pumping stations and sewage screening plant; design of storm drain rating station for measuring run-off. TT 0.6: P 0.6: RC 0.2: D 0.6. TT 10.1: SP 3.4: P 6.7: RC 3.2: D 1.3. Refers to G. E. Baker, A. Marston, C. S. Nichols, W. J. Schlick, H. W. Streeter, R. D. Van Alstine.

FOR TRANSFER

FROM THE GRADE OF ASSOCIATE MEMBER

875 (2) BEAN, PAUL LEONARD, Assoc. M., 145 Davis Ave., Auburn, Me. (Elected Sept. 2, 1914.) (Age 43. Born Saco, Me.) 1904 B. S. in Civ. Eng. and 1909 C. E., Coll. of Eng., Univ. of Me. June to Sept. 1904 on flowage survey, Union Water Power Co., Lewiston, Me. TT 2.3: SP 2.3. March 1905 to March 1906 Computer on street railway special work for Wm. Wharton, Jr. & Co., Philadelphia, Pa. TT 1: SP 1. March 1906 to Sept. 1907 Draftsman, Phoenix Bridge Co., Phoenixville, Pa. TT 1.5: SP 1.5. Sept. 1907 to Sept. 1909 Instructor in Civ. Eng., Univ. of Maine, Orono, Me. TT 2: SP 2. Sept. 1909 to Sept. 1912 Asst. Prof., and Sept. 1912 to Jan. 1915 Associate Prof., of Civ. Eng., Univ. of Maine, stream gauging, hydrographic surveys, design and testing material on hydro-electric plant; also member of firm, Boardman & Bean, on general consulting work, water-power surveys, bridge designing, investigating, material testing, etc. TT 5.3: P 5.3: RC 5.3: D 4.3. Jan. 1915 to Oct. 1919 Chf. Engr., Maine Public Utilities Comm., Augusta, Me., organized Eng. Dept. and had responsible charge of all work of Commission, stream gaugings, also on valuation of all public utilities, drew up standards of service for gas and electricity utilities; extensive work on grade-crossing elimination, highway and railway bridge investigations involving condemnation and design and repair of structures; State Inspector of Dams, Maine; in sole responsible charge of complete water power and storage survey, presented to Legislature in 1918 (report covered legal, engineering and administrative phases). TT 4.8: P 4.8: RC 4.8: D 4.8. Oct. 1919 to Jan. 1924 member of firm, Sawyer & Bean, Cons. and Hydr. Engrs., Lewiston, Me., during period firm carried out 188 engineering projects involving investigation, design and construction, consisting of design and construction of water-works, hydro-electric stations, storage projects, valuations of developed and undeveloped water powers, safety and reconstruction of dams, reports on redevelopment of water-power privileges, steel and concrete bridge construction, etc. TT 4.2: P 4.2: RC 4.2: D 4.2. Jan. 1924 to date Agt. and Engr., Union Water Power Co., Androscoggin Reservoir Co. and Union Elec. Power Co. all of Lewiston, being administrative head in responsible charge, and designs and overseas repairs and new construction, also new developments contemplated (companies own and operate the power on the Androscoggin River, total about 25 000 h. p., also storage reservoirs at head waters of Androscoggin River, capacity 30 000 000 cu. ft.). TT 0.7: P 0.7: RC 0.7: D 0.7. TT 21.8: SP 6.8: P 15: RC 15: D 14. Refers to H. K. Barrows, H. S. Boardman, J. A. Leonard, F. H. Mason, C. W. Mullen, W. H. Norris, P. D. Sargent.

876 (12) CARMICHAEL, JAMES TROY, Assoc. M., Box 398, Helena, Mont. (Elected June 6, 1921.) (Age 34. Born Augusta, Mont.) 1907 to 1910 student, Univ. of Missouri (2 years) and Univ. of Washington (1 year). June 1910 to April 1912 Computer and Draftsman, Eng. Dept., City of Seattle. TT 1.8: P 1.8. April 1912 to Jan. 1913 Asst. Engr., The Franco-Canadian Trust Co., Victoria, B. C., in charge office and four field parties, design of water-works and sewer system of 575-acre subdivision; construction of all municipal improvements on subdivision. TT 0.8: P 0.8: RC 0.8: D 0.8. Jan. to July 1913 Asst. Supt., construction of irrigation system for 15 000 acres, Sinclair, B. C., design contractors equipment. TT 0.5: P 0.5: RC 0.5: D 0.5. July 1913 to April 1914 Foreman, Montague-O'Reilly Co., Gen. Contrs., Portland, Ore. TT 0.8: P 0.8: RC 0.8. April to Dec. 1914 Inspector and Chf. of Eng. Party, \$2 000 000 hydro-electric construction, City of Seattle, Wash. TT 0.7: P 0.7: RC 0.7. Dec. 1914 to July 1915 Asst. Engr. in charge appraisal underground construction, Pacific Telegraph and Telephone Co., Portland. TT 0.6: P 0.6: RC 0.6. July 1915 to June 1916 Walking Boss, Montague-O'Reilly Co. TT 1: P 1: RC 1. June to Dec. 1916 Supt., P. G. Dunn & Co., Paving Contrs., Seattle, Wash. TT 0.5: P 0.5: RC 0.5. Dec. 1916 to April 1920 Mgr. of sheep and cattle ranch, Augusta, Mont. (not engineering work). April 1920 to May 1921 Asst. City Engr., Helena, Mont., charge survey 5 miles streets to prepare for paving, construction of 5 miles water mains; charge of plans for this

work. *TT 1: P 1: RC 1: D 0.4.* May 1921 to May 1922 Res. Engr. on paving construction, Montana Highway Comm., Helena. *TT 1: P 1: RC 1.* May 1922 to date City Engr., Helena, during construction of \$400 000 worth of paving, sewer and watermain design and construction. *TT 2.3: P 2.3: RC 2.3: D 1.5.* *TT 11: P 11: RC 9.2: D 3.2.* Refers to F. M. Brown, L. D. Conkling, A. H. Dimock, J. N. Edy, C. S. Heldel, H. W. Holmes, W. A. Lamb, R. D. Rader, R. H. Thomson.

877 (10) GANTT, JAMES JERVEY, Assoc. M., Care, Florida East Coast Ry. Co., St. Augustine, Fla. (Elected Nov. 26, 1918.) (Age 35. Born Charleston, S. C.) 1910 B. E., N. C. State Coll. of Eng. and Agri. Summers 1908-1909 Draftsman, Simons-Mayrant Co., Engrs. and Contrs., Charleston, S. C., platting and tinting maps; also Rodman. *TT 2: SP 2.* Aug. to Oct. 1910 Foreman for Harry Oliver, Bldg. Contr., Charleston, remodeling 3-story brick school building. *TT 0.2: SP 0.2.* Oct. 1910 to Nov. 1911 Inspector and Draftsman, City Engrs., Office, Charleston, storm and sanitary sewers, and pumping stations, and record maps of pipelines, house connections, etc. *TT 1: P 1.* Nov. 1911 to Jan. 1912 Temporary Supt of Constr., U. S. Govt., pile foundation for Immigrant Station, and wharf, at Charleston. *TT 0.2: P 0.2: RC 0.2.* Feb. 1912 to March 1914 Paving and Concrete Inspector, City Engr.'s Office, Augusta, Ga., 3 months repairing street pavements and some repaving; Asst. Engr. on pavements, also instrument work, estimates and general inspection; Nov. to Dec. 1912 in charge of construction of "Barrett Plaza", all instrument work, inspection and estimates for concrete fountain basin with marble superstructure; Jan. 1913 to March 1914 construction of "Butt Memorial Bridge" (3 spans, reinforced concrete, 165 ft. long), all instrument work, passed on foundations, inspection and estimates, also in charge of ornamental work and paving. *TT 2: P 2: RC 1.5: D 0.2.* March to Aug. 1914 Asst. City Engr., Gastonia, N. C., concrete sidewalk construction, surveys for new streets and estimates. *TT 0.4: P 0.4.* Aug. 1914 to Aug. 1915 Asst. Engr., Jefferson Constr. Co., Charleston, on construction of five concrete piers, timber fenders and false-work for steel superstructure for bridge over Santee River; fenders and trestle approaches for bridge over Cooper River, construction of Seaboard Air Line terminals at Charleston, S. C., and river surveys and maps for Seaboard Air Line Ry. *TT 1: P 1: RC 0.5.* Aug. 1915 to Feb. 1921 Draftsman, Masonry Inspector and Asst. Engr., Southern Ry. Co., on design of concrete box culverts and small arches, maps, profiles, etc.; construction of reinforced concrete abutments for 4-track bridge, also box culverts and small arches on 7 miles of double-tracking, instrument work, inspection, estimates and record plans; from June 1916 to June 1920 on construction of 57 miles of double track from Central, S. C., to Cornella, Ga., design of heavy timber overhead bridges, concrete underpasses, drafting; in charge of field party making surveys for elimination of grade crossings, etc., and in charge of construction of overhead bridges, depot buildings, and concrete masonry, also some grading for highways to crossings and depot sites, drawing record plans of structures; June to Nov. 1920 on completion reports of double-track construction for Interstate Commerce Comm.; Nov. 1920 to Feb. 1921 in Charlotte (N. C.) office making maps, plans and profiles, also masonry drawings to accompany completion reports; also designed forms for C. W. Lane & Co., Contrs. for North Broad River Viaduct (about 1 313 ft. long, piers reinforced concrete approx. 200 ft. high); designed several houses, and made miscellaneous surveys for City of Toccoa, Ga., Stephens County, Ga., and others. *TT 5.6: P 5.6: RC 3.5: D 1.* Feb. to March 1921 Locating Engr., 12th Dist., State Highway Dept. of Georgia, located $4\frac{1}{2}$ miles of highway. *TT 0.1: P 0.1: RC 0.1.* March 1921 to Aug. 1924 Asst. Engr., M. of W. Dept., Florida East Coast Ry., estimates and surveys, drawing standard plans of turnouts, switches, etc., drafting; Asst. Engr. of Constr., plans, surveys, and estimates for new main lines; at present in charge of about 25 miles of double-track construction. *TT 3.5: P 2.5: RC 1.* *TT 16: SP 2.2: P 13.8: RC 6.8: D 1.2.* Refers to B. L. Crenshaw, E. M. Durham, Jr., F. Furlow, J. A. Higgs, Jr., H. N. Rodenbaugh, H. Stringfellow, N. Wingfield.

878 (2) HOLDEN, CHARLES ARTHUR, Assoc. M., Hanover, N. H. (Elected Affiliate Nov. 1, 1905; Assoc. M. March 1, 1910). (Age 52. Born Hudson, Mass.) 1895 B. S., Dartmouth Coll. 1901 C. E., Thayer School of Civ. Eng. 1895 in office of Engr., Middletown & Portland Bridge Co., Middletown, Conn., drafting, computing, etc. *TT 2.3: SP 2.3.* 1895 to 1898 Instrumentman and Chf. of Party, Boston & Albany R. R. Co., Boston, Mass., drafting, design, Inspector on masonry retaining-wall construction; in charge of party on surveys, layout of buildings, new track and other construction, etc. *TT 2.3: SP 1.3: P 1: RC 0.8: D 0.2.* 1898 to 1900 Instructor in Civ. Eng., Worcester Polytechnic Inst. *TT 2: P 2.* 1900 to 1904 Instructor in, 1904 to 1905 Asst. Prof., 1905 to 1908 Associate Prof., and 1908 to date Prof. of, Civ. Eng., Thayer School of Civ. Eng.; from 1918 to 1919 Acting Director, and since 1919 Director; 1901 (about 3 months) also Instructor, Univ. of Wisconsin; also

Res. Hydrographer, U. S. Geological Survey (1900 to 1904); Instructor (1901 to 1904) and Asst. Prof. (1904 to 1906), Mathematical Dept., Dartmouth Coll.; Engr. for State of New Hampshire in New Hampshire-Vermont Boundary litigation (since 1916); Supervisor of Military Training, Dartmouth Coll. Training Detachment (June to Dec. 1918); New Hampshire Correspondent of Water Conservation Committee, Eng. Council (1919); Member, New Hampshire Comm. on Conservation of Water Power; Member, Board of Selectmen and Precinct Commrs., Hanover, having charge of highway maintenance and construction, development of an accounting system, etc. (1921 to 1923). TT 20.5: P 20.5: RC 19.3: TT 27.1: SP 3.6: P 23.5: RC 20.1: D 0.2. Refers to J. T. Chase, H. S. Crocker, H. P. Eddy, R. Fletcher, A. W. French, A. Hazen, H. A. Wells, W. J. Wilgus, F. E. Winsor.

879 (15) MONTGOMERY, JULIAN, Assoc. M., 1016 City National Bank, Wichita Falls, Tex. (Elected April 16, 1918.) (Age 35. Born Whitewright, Tex.) 1912 C. E., Univ. of Tex.; 1915 M. S., Univ. of Ill. June to Sept. 1910 Rodman, and June to Sept. 1911 Instrumentman and Timekeeper, Fred A. Jones Constr. Co., Dallas, Tex. TT 2: SP 2. June 1912 to Sept. 1913 Asst. Chf. Engr., sewer design and construction, City of Austin, Tex. (\$300 000 worth of sewers built). TT 1.2: SP 0.3: P 0.9: RC 0.5: D 0.4. Sept. 1913 to June 1914 and Sept. 1914 to June 1915 Research Fellow, Laboratory of Theoretical and Applied Mechanics, Univ. of Illinois; graduate student. TT 1.5: P 1.5: RC 0.7: D 0.7. June to Sept. 1914 Asst. City Engr. of Austin. TT 0.2: P 0.2: RC 0.2. Oct. to Nov. 1915 Transitman on good roads, Grayson Co., Tex. TT 0.1: P 0.1: RC 0.1. Nov. 1915 to June 1916 Engr. for City of Sherman, Tex., in charge of paving, revision of office system, sewer work, etc. TT 0.7: P 0.7: RC 0.7: D 0.3. June 1916 to June 1917 City San. Engr., Austin, in charge of \$50 000 storm sewer construction and all sewer and bridge design and construction. TT 1: P 1: RC 1: D 0.5. June 1917 to May 1918 Office Engr., State Highway Dept., Austin, road and bridge design, drafting, specifications, etc. TT 0.9: P 0.9: RC 0.9: D 0.9. May 1918 to Jan. 1919 with U. S. Army, first at Officers Training Camp, Aug. 1918 commissioned 2d Lieut. Infantry and Sept. 1918 transferred to Eng. Corps. TT 0.7: P 0.7: RC 0.7. Jan. to May 1919 Div. Engr., Texas State Highway Dept. TT 0.3: P 0.3: RC 0.3. May 1919 to June 1920 County Engr., Rockwall Co., Tex., in charge of \$1 000 000 road system, surveys, design and construction, etc. TT 1.1: P 1.1: RC 1.1: D 0.5. June 1920 to April 1922 City Engr., Wichita Falls, Tex., on sewer design and construction, paving and water-works (\$1 000 000 each), completing records, systematizing, etc. TT 1.8: P 1.8: RC 1.8: D 1.1. April 1922 to date member, Montgomery and Ward, Cons. Civ. Engrs., Wichita Falls, sewer systems, paving, water-works, appraisals, sub-division work, city planning, oil field surveying and locations, several million dollars worth being planned and supervised. TT 2.3: P 2.3: RC 2.3: D 1.5. TT 13.9: SP 2.3: P 11.6: RC 10.4: D 6.1. Refers to C. A. Clark, W. G. Morrison, E. N. Noyes, A. N. Talbot, T. U. Taylor, R. A. Thompson, M. C. Welborn.

880 (14) NICKEY, EMIT COIN, Assoc. M., Box 189, Poplar Bluff, Mo. (Elected Nov. 25, 1919.) (Age 42. Born near Trafalgar, Ind.) 1902 to 1904 (2 years) student in Civ. Eng., Ohio Northern Univ. Jan. 1905 to Jan. 1917 County Surveyor, Butler County, Mo., in charge of land boundary surveys; until Feb. 1907 ex-officio Road and Bridge Commr. in charge of road and bridge design and construction. May 1905 to May 1909 also City Engr. of Poplar Bluff, Mo., having charge of city sub-division work, side walk and street work. Aug. 1909 to date County Highway Engr., Butler County, having supervision over all highway and bridge construction work in county, including surveys and design (average annual expenditure for such work about \$75 000). 1913-1914 also Drainage Engr. for Drainage Distrs. Nos. 10 and 11, Butler County, made surveys, prepared plans and estimates (estimated cost of improvements \$130 000). May 1919 to Jan. 1920 also on surveys, plans and estimate of cost on Federal and State Aid Road Project No. 129 (estimated cost \$300 000) for Wayne County, Mo. 1919-1924 also for County Court of Butler County, prepared plans, made surveys for Federal and State Aid road on Projects Nos. 58, 59, 204, 207 (total cost aggregating \$1 031 035), and Route 42, Butler Co. (estimated cost \$75 000). Oct. 1919 to date County Surveyor, Butler County, in charge of land boundary surveys and sub-division work. April 1921 to date also City Engr. of Poplar Bluff, made surveys, prepared plans and estimates for concrete paving on about thirty streets, supervised construction of this work (total cost about \$275 000); also prepared a number of plans and made estimates of cost, supervised construction on a number of sidewalks and drainage projects; since 1904 has also done a large amount of professional work in addition to official work, townsite sub-division projects, drainage work, cadastral surveys, map-making, etc. TT 20: P 20: RC 20: D 20. Refers to H. W. English, H. E. Frech, A. A. Miller, R. L. Miller, F. W. Sayers, A. C. Spiker, J. C. Travilla, P. R. Van Frank.

881 (9) PANZER, ROBERT RUDOLPH, Assoc. M., 609 Southern Ohio Bank Bldg., Cincinnati, Ohio. (Elected May 31, 1916.) (Age 47. Born Cincinnati, Ohio.) 1901 B. S. in C. E., Cincinnati Univ. June to Sept. 1899 Transitman on preliminary railroad survey, Cincinnati, Ohio, to Connersville, Ind. *TT 2: SP 2.* March to Aug. 1901 with Ward Baldwin, Cons. Engr., survey of pipe-line for water-works. *TT 0.5: SP 0.5.* Aug. 1901 to Nov. 1903 Asst. on Eng. Corps, Pennsylvania Lines West of Pittsburgh. *TT 2.2: SP 2.2.* Nov. 1903 to Jan. 1912 with W. F. Potthoff Constr. Co., Cincinnati, from Detailer to Asst. Chf. Engr., finally in complete charge of design and detail of numerous steel and reinforced concrete buildings, such as reinforced concrete stable (\$30 000), two office buildings (8 and 6 stories, \$50 000 each), two loft buildings (8 and 6 stories, \$100 000 and \$80 000), Ohio Mechanics Inst. Bldg. (\$600 000), and a warehouse (\$50 000). *TT 8.1: SP 3.5: P 4.6: RC 4.6: D 4.6.* Jan. 1912 to Dec. 1915 Chf. Engr., Dept. of Bldgs., Cincinnati, passed on plans for important buildings erected, and Dec. 1915 to Jan. 1920 Asst. Commr. of Bldgs. and Chf. Inspector of Bldgs. for City of Cincinnati. *TT 8: P 8: RC 8: D 8.* Jan. 1920 to date in private practice as member of firm, Rendigs, Panzer and Martin, Archts. and Structural Engrs., Cincinnati, in complete charge of all structural work, some of important buildings designed are, warehouse, Brighton Transfer Co. (\$150 000), pottery, Wheatley Pottery Co. (\$120 000), two garages, Studebaker (\$250 000) and Herold Motor Co. (\$100 000), office and bank buildings, Brotherhood of Ry. Clerks (\$400 000) and Temple Bar Building Co. (\$750 000). *TT 4.7: P 4.7: RC 4.7: D 4.7.* *TT 25.5: SP 8.2: P 17.3: RC 17.3: D 17.3.* Refers to W. P. Anderson, J. C. Lathrop, H. F. Passel, F. L. Raschig, H. F. Shipley.

882 (12) ROWE, DONALD HEFLEY, Assoc. M., 945 E. Broadway, Portland, Ore. (Elected Jun. May 7, 1913; Assoc. M. Oct. 14, 1919.) (Age 33. Born Portland, Ore.) 1910 B. S. E. M., Ore. Agri. Coll. June to Sept. 1910 in charge of mine survey party, locating properties and surveying and mapping mines in Coeur d'Alene Dist., Idaho, for various mine owners. *TT 2.3: SP 2.3.* Sept. 1910 to March 1911 Timekeeper and Asst. Supt. of Constr., United Eng. & Constr. Co., on various building construction. *TT 0.5: SP 0.5.* May 1911 to Aug. 1914 with Waddell & Harrington, Cons. Engrs., Kansas City, Mo., as follows: May 1911 to Sept. 1912 Asst. Res. Engr. on railroad bridge over Willamette River at Portland, Ore., laying out work, inspecting and supervising construction (cost \$1 750 000); Sept. to Dec. 1912 Res. Engr., Willamette River Bridge, Harrisburg, Ore., for Oregon Elec. Ry. (\$250 000); Dec. 1912 to July 1913 in charge of installation of machinery and electrical equipment for 2 vertical lift bridges for City of Tacoma, Wash.; July 1913 to Jan. 1914 in charge of repairing Oregon-Washington R. R. & Navigation Co. bridge at Portland; Feb. to Aug. 1914 Asst. on surveys and borings for Interstate Bridge over Columbia River at Vancouver, Wash. *TT 3.3: P 2.3: RC 2.3.* Aug. 1914 to March 1915 Engr. for Geo. H. Griffin, Bridge Contr., Seattle, Wash., managing construction of highway bridges in Oregon and Washington. *TT 0.6: P 0.6: RC 0.6.* April 1915 to Sept. 1917 and Sept. 1920 to May 1922 Engr., Portland (Ore.) Bridge & Bldg. Co. on various bridge and dock construction work, estimating, designing, and superintending. *TT 4.1: P 4.1: RC 3.2: D 1.9.* Sept. 1917 to May 1919 with Engrs., U. S. Army, as 2d Lieut., 1st Lieut. and Capt., 17 months with A. E. F. June 1919 to June 1920 Engr. for Maeder Steel Products Co., Portland, Ore., designing concrete structures. *TT 1: P 1: D 1.* Aug. 1922 to date Engr. and Supt. of Constr. with Lindstrom & Felgenson, Contrs., Portland, Ore., on general bridge and dock construction. *TT 2: P 2: RC 2.* *TT 13.8: SP 2.8: P 11: RC 8.2: D 1.9.* Refers to C. K. Allen, G. S. Edmondstone, G. T. Forsyth, L. Griswold, S. Murray, J. A. L. Waddell.

883 (14) SHOCKLEY, CLYDE ARTHUR, Assoc. M., 800 Graphic Arts Bldg., Kansas City, Mo. (Elected June 1, 1920.) (Age 34. Born Springfield, Mo.) 1913 B. S., Univ. of Kans. July to Oct. 1910 Rodman, Kansas City Southern Ry. *TT 2.3: SP 2.3.* Oct. 1910 to Feb. 1911 Rodman, St. Louis, San Francisco Ry. *TT 0.3: SP 0.3.* Feb. to Oct. 1911 Rodman, and June 1913 to Feb. 1914 Rodman and Instrumentman, Kansas City Terminal Ry. *TT 1.5: SP 1.5.* Jan. to Oct. 1912 Chf. of Party on municipal work in Kansas City, Mo., had direct charge of surveys and approved all construction in a district (one-fourth of city). *TT 0.7: P 0.7: RC 0.7.* June to July 1914 Asst. to City Engr., Clinton, Iowa, on design and supervision of pavement and sewers. *TT 0.2: P 0.2: RC 0.2.* Aug. 1914 to June 1918 Civ. Engr., Grade I, Interstate Commerce Comm., on valuation of railroads, 9 months in field in charge of party on cross-sectioning roadway and remainder of time in office on computations; 1 year Senior Computer practically in charge of computing force, among other things revised grading calculations on several roads, the largest being the Soo Lines; 1 year Asst. to Senior Roadway Engr. handling correspondence with railroad officials, twelve parties in field and settling controversies. Oct. 1917 to date also member of firm and Mgr., Shockley Eng. Co., some of the more important work being valuation maps for four small railroads and com-

pliance with valuation orders of Bureau of Valuation, Interstate Commerce Comm., preparation of plans for 100 miles of Federal Aid Highways; design and, in some cases, supervision of construction of various improvements, including waterworks for Concordia, Mo., and Enterprise and Morrill, Kans.; sewers for Excelsior Springs, Maitland and Marshall, Mo., and Morrill, Kans.; pavements for Excelsior Springs, Gallatin, Hayti, Marshall and Weston, Mo., and Enterprise, Frankfort and Wellsville, Kans. (projects cost \$10 000 to \$200 000); also storm sewers for Hayti, Mo.; other similar work under construction or plans in progress (cost up to \$500 000); also, June to Nov. 1918 Computer on valuation, Atchison, Topeka & Santa Fe Ry.; Nov. 1918 to April 1919 Computer on land valuation, Interstate Commerce Comm.; Feb. 1919 to April 1922 Acting City Engr., Excelsior Springs, Mo., 20 000 sq. yd. of pavement and 4 miles of sanitary sewers designed and construction supervised. *TT 10: P 10: RC 10: D 10. TT 15: SP 4.1: P 10.9: RC 6.2: D 5.1.* Refers to C. K. Allen, R. C. Barnett, W. L. Benham, R. E. McDonnell, C. R. Mandigo, J. D. Mohler, J. A. L. Waddell, N. E. Waddell, C. C. Witt, A. R. Young.

884 (14) TITUS, JAMES HAMILTON, Assoc. M., 2069 Railway Exchange Bldg., St. Louis, Mo. (Elected Nov. 26, 1918.) (Age 44. Born Ottawa, Kans.) Nov. 1901 to Nov. 1902 Asst. Locating Engr., K. C. B. & W. Ry., location and construction, cost estimates and bridge design. *TT 1: P 1: RC 1: D 0.2.* Nov. 1902 to Nov. 1903 Res. Engr., Frisco R. R., Perry, Okla., 26 miles of construction. *TT 1: P 1: RC 1.* Nov. 1903 to Sept. 1904 Res. Engr., LaCrosse & Southeastern R. R., LaCrosse, Wis., 16 miles of location and construction. *TT 0.8: P 0.8: RC 0.8.* Sept. 1904 to Nov. 1905 Asst. Engr. on M. of W., Frisco R. R., Corpus Christi, Tex., bridge inspection, concrete construction, subdividing 42 000 acres into 40-acre tracts, making tests for water, drilling artesian wells and measuring flow. *TT 1.2: P 1.2: RC 1.2: D 0.3.* Nov. 1905 to Aug. 1906 Res. Engr., D. K. & G. Ry. (now Santa Fe), Medicine Lodge, Kans., location (50 miles), construction (26 miles). *TT 0.8: P 0.8: D 0.8.* Aug. 1906 to Aug. 1907 Asst. Engr., Kansas City Southern Ry., Kansas City, Mo., location and maintenance of way. *TT 1: P 1: RC 1.* Aug. to Dec. 1907 Asst. Engr. for Wynkoop Kiersted, Constr. Engr., Kansas City, Mo., surveys and estimates, water-works system at Soldiers Home, Leavenworth, Kans., sewers and water-works, Liberty, Mo., examinations, Kansas City Star paper mill for extensions. *TT 0.3: P 0.3: RC 0.3: D 0.1.* Dec. 1907 to Sept. 1908 Res. Engr., T. & S. W. Ry., Topeka, Kans., location, estimates and bridge design (60 miles). *TT 0.7: P 0.7: RC 0.7: D 0.3.* Sept. 1908 to Feb. 1909 Res. Engr., Kansas Colorado Ry., Garden City, Kans., 75 miles location, 20 miles construction. *TT 0.5: P 0.5: RC 0.5: D 0.1.* Feb. to Sept. 1909 Asst. Engr., Topeka Drainage Board, location, estimates and design of earth and reinforced concrete dyke for flood protection. *TT 0.6: P 0.6: RC 0.6: D 0.3.* Sept. 1909 to July 1911 City Engr., Arkansas City, Kans., design and construction of pavement, sewers and water-works. *TT 1.7: P 1.7: RC 1.7: D 1.7.* July 1911 to Oct. 1912 private engineering work, Wichita, Kans., surveys, designs and estimates, sewer, paving, water-works, bridges and reinforced concrete dams, Kansas and Oklahoma. *TT 1.3: P 1.3: RC 1.3: D 0.8.* Oct. 1912 to Jan. 1914 Res. Engr., Chicago & Eastern Illinois Ry., 20 miles new construction, design and construction, ten reinforced concrete bridges, rebuilding three yards, construction of 4-track coal chute. *TT 1.2: P 1.2: RC 1.2: D 0.2.* Then Supt., J. W. McMurray Constr. Co., Kansas City, Mo., construction of heavy sea wall and bridges. *TT 1: P 1: RC 1.* Jan. 1915 to Feb. 1919 Asst. Engr., C. & E. I. R. R., Chicago, in charge of office checking computations for railroads of Federal valuation inventory of 1 040 miles; Engr. in charge of construction of double-track reinforced concrete bridge (three 100-ft. and two 50-ft. arches, approx. cost \$300 000); also change of line. *TT 4.1: P 4.1: RC 4.1.* Feb. 1919 to date Asst. Engr., Wabash Ry., St. Louis, in charge of inventory of 400 miles of road and track, and 800 miles of bridges and buildings, also computations of quantities, corrections and report of Interstate Commerce Comm. report on 2 400 miles of bridges. *TT 5.2: P 5.2: RC 5.2. TT 22.4: P 22.4: RC 22.4: D 4.* Refers to E. F. Collins, A. O. Cunningham, W. Dennis, W. Hood, F. G. Jonah, W. Kiersted, J. A. Moss.

FROM THE GRADE OF JUNIOR

885 (10) FISHER, LINDEN VAN HORN, Jun., Box 1048, Memphis, Tenn. (Elected Oct. 10, 1921.) (Age 28. Born Philadelphia, Pa.) 1920 B. S. in C. E., Pa. State Coll. July 1920 to Oct. 1921 with Virginia Bridge & Iron Co., until Feb. 1921 as Detailer, then Estimator. *TT 3.3: SP 2.6: P 0.7: D 0.2.* Oct. 1921 to June 1922 Designer, Bridge Dept., North Carolina State Highway Dept. *TT 0.6: P 0.6: D 0.6.* June 1922 to date Asst. Contr. Engr., Virginia Bridge & Iron Co., Memphis office. *TT 2.2: P 2.2: RC 2.2: D 1.* *TT 6.2: SP 2.6: P 3.6: RC 2.2: D 1.8.* Refers to P. A. Blackwell, R. A. Caughey, H. A. Davies, R. Hortenstine, E. S. Humphreys, G. P. Jones, V. H. Smith.

886 (5) **ROBERTS, ELLIOTT BURGESS**, Jun., U. S. Coast and Geodetic Survey, Washington, D. C. (Elected June 19, 1922.) (Age 25. Born Boston, Mass.) 1921 B. S., Mass. Inst. Tech. June to Sept. 1918 and June to Aug. 1919 Draftsman, E. & T. Fairbanks & Co. Sept. 1919 to June 1920 (part of time) Draftsman, Lewis Recovery Corporation. June to Aug. 1920 Rodman, The Foundation Co., construction field work, Buffalo, N. Y. Aug. to Sept. 1920 Research Asst. for J. B. Breed, Cambridge, Mass., searching files of engineering literature and abstracting instances of dam failures. Sept. 1920 to June 1921 (part of time) Asst. in surveying courses, Massachusetts Inst. of Technology. TT 2: SP 2. Aug. 1921 to date with U. S. Coast and Geodetic Survey, until Feb. 1922 as Jun. Engr., gravity and astronomic determinations, Mississippi delta, then Aid, precise triangulation in New Mexico, primary traverse in Virginia and North Carolina, Chf. of Party on precise leveling in New England; since Sept. 1923 Jun. Hydrographic and Geodetic Engr., Chf. of Party, primary traverse, triangulation and precise leveling. TT 3: P 3: RC 1.5. TT 5: SP 2: P 3: RC 1.5. Refers to J. B. Babcock, 3d, W. Bowie, C. V. Hodgson, L. P. Raynor, P. C. Whitney.

887 (11) **STEINMETZ, WILLIAM JOHN**, Jun., 1711 Winona Blvd., Los Angeles, Cal. (Elected Dec. 6, 1920.) (Age 31. Born Denver, Colo.) 1920 B. S. in C. E., Univ. of Colo. June 1920 to May 1921 Draftsman, American Bridge Co., Gary (Ind.) Plant, steel detailing; investigation of important bridges for deflections under loads and temperature changes. TT 2.9: SP 2: P 0.9: D 0.2. Aug. 1921 to May 1922 with California Highway Comm., Div. 7, Los Angeles, Cal., until Nov. 1921 as Draftsman, also estimating; then Asst. Res. Engr., on inspection and progress reports. TT 0.9: P 0.9: RC 0.6. June 1922 to Jan. 1923 Draftsman, American Bridge Co., Gary Plant, detailing and checking. TT 0.7: P 0.7. Feb. 1923 to Aug. 1924 with Nevada Cons. Copper Co., McGill, Nev., designing, checking, detailing, and estimating of new work and alterations of miscellaneous steel and concrete structures. TT 1.8: P 1.8: RC 1.8: D 1.8. TT 6.3: SP 2: P 4.3: RC 2.4: D 2. Refers to S. V. Cortelyou, F. W. Dencer, W. W. Patch, H. C. Reeder, C. E. Webb.

The Board of Direction will consider the applications in this list not less than thirty days after the date of its issue.